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Medical and Surgical Journal.

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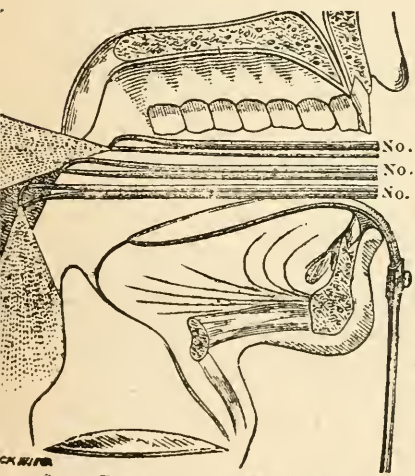

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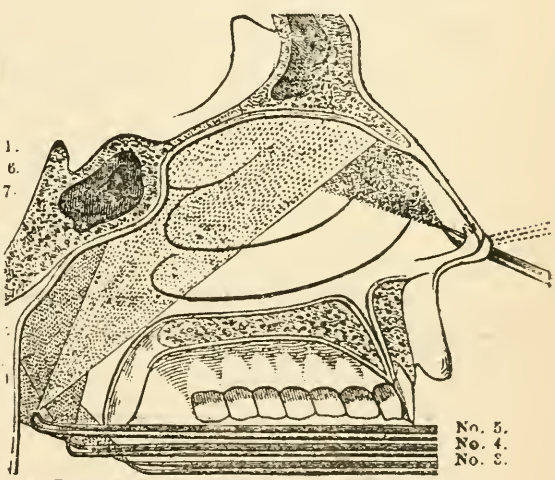

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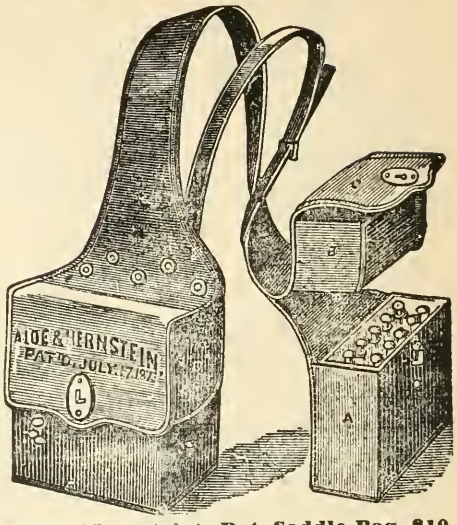

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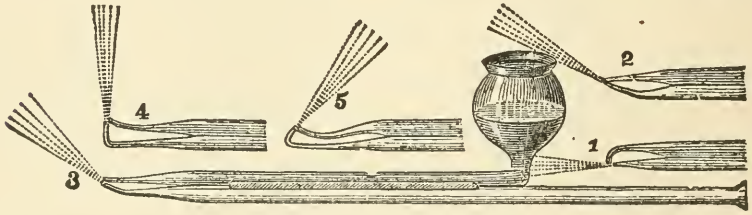

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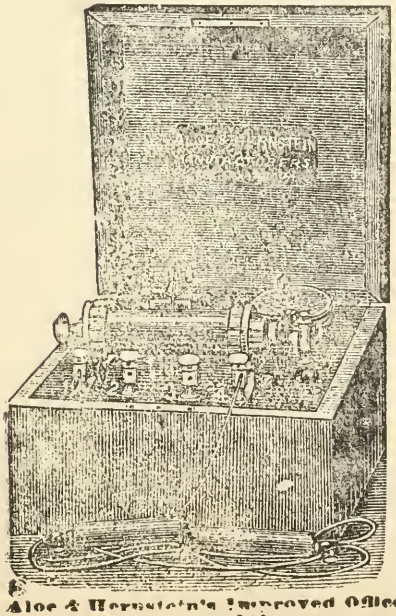

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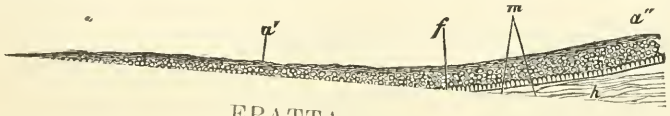
Original Contributions.

Article XXXVI.

Glaucoma.* By Flavel B. Tiffany, M. D., Kansas City, Mo.

Gentlemen: In considering the subject of glaucoma, that we may better understand the pathology and etiology of the disease, I would first call your attention to the anatomy and physiology of the organ in which this dire disease is located; more especially to the ciliary region, and the parts in close proximity. Cursorily glancing at the globe, we find that it consists of a certain number of tunics and refracting media, with numerous vessels and nerves. The structures to which I particularly wish to call your attention are Schlemm's canal, and those



ERATTA.

Through mistake of the printer Fig. 6. on page 202, Fig. 7. on page 203, and Fig. 11 on page 206. are printed upside down.

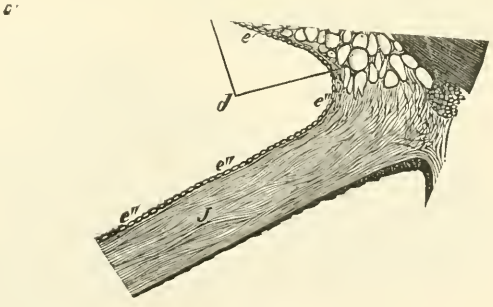


Fig. 5, Scetion of normal eye through the ciliary region —Williams.

in near proximity. Schlemm's canal is the circular canal sit-

* A paper read before the Missouri State Medical Society, at Jefferson City, May 16, 1883.

uated at the junction of the cornea with the sclera, in front of the ciliary attachment of the iris. (Fig. 5, v. v.) Internally and posteriorly it is bounded by the ligamentum pectinatum iridis and, the ciliary muscle; anteriorly and externally, by fibres of the cornea and the sclerotic. The iris or diaphragm of the eye (J), consists of two sets of fibres, radiating and circular, with blood vessels; nerves, etc. Anteriorly the iris is attached to the cornea by the ligamentum pectinatum iridis; in fact, this ligament is a continuation of the endothelium of the cornea (Desemet's membrane, d). The radiating fibres of the iris become continuous with those of the ciliary muscle, and ciliary processes (Fig. 7), and which muscle and processes are principally formed by folds or plaitings of the middle and internal layers of the choroid.

The canal of Fontona is the triangular space enclosed by the ligamentum pectinatum, cornea, ciliary muscle, and iris. (Fig. 5, f. m.) It is crossed by bands of fibres, and is a loose cellular net-work which connects with Schlemm's canal. The ciliary muscle consists of two sets of fibres: meridianal and circular. (Fig. 7, a. & b.) The meridianal take their origin from the posterior wall of Schlemm's canal, extending back upon the choroid; while the circular are more intimately connected with the posterior wall of Fontona's spaces, extending back, and connecting with the fibres of the ciliary processes and suspensory ligament. (Fig. 7, a.) In highly myopic eyes the meridional fibres are strongly developed, while the circular fibres are scarcely to be seen. (Fig. 7.)

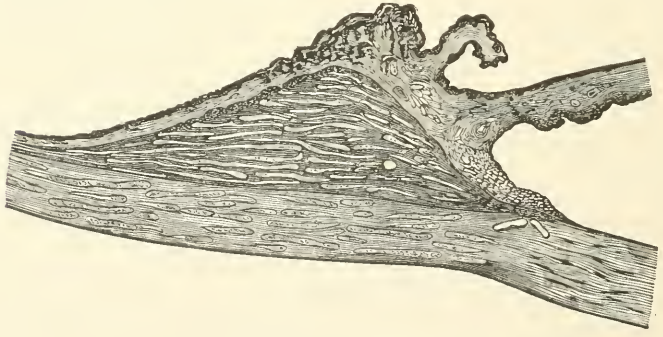


Fig. 6, Section of a myopic eye.—Ivonof.

In the hypermetropic eye the opposite conditions prevail.

The meridional fibres are short, while the circular are highly developed. (Figs. 6 & 14.) Immediately posterior to the iris we have the crystalline lens in its capsule, supported by the suspensory ligament, the vitrious body, and ciliary processes.

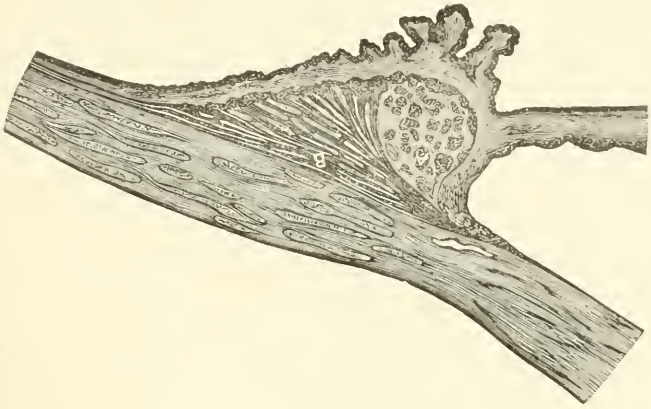


Fig. 7, Hypermetropic eye.—Ivonof.

Blood vessels of the eye (Fig. 8.) according to Lieber, represents the distribution of blood vessels to the eye. The principal arterial blood supply to the anterior portion of the eye, is through the long posterior (c) and the anterior ciliary arteries (f). The posterior penetrate the sclera in a very oblique course about midway between the equatorial and posterior parts of the eyeball; passing forward in the outer layer of the choroid to the ciliary muscle, they divide into several branches, penetrating the muscle from opposite sides. These branches uniting, form a circle near the periphery of the iris (g & h). the circulus arteriosus iridis major. The anterior ciliary arteries, eight or ten in number, arising from muscular branches of the opthalmic, enter the eye in the region of the ciliary muscle, unite with the circle just described, assisting in the distribution of blood to the ciliary bodies, ciliary ligament, and iris. From the circulus arteriosus iridis major, a series of very important branches is given off to different parts of the eye ball, viz.: to the choroid (*n*) ciliary processes (l) and iris (i). The recurrent branches passing back into the ciliary muscle (m) are very numerous, forming a perfect meshwork throughout the muscle. The arterial twigs to the ciliary processes are short tubes, which enter these bodies from the circulus arterious iridis major. After they have trav-

crsed the ciliary muscle, each, of the seventy or eighty processes receives two or three twigs; in each process itself, the arterial vessels split up rapidly, and subdivide into a considerable num-

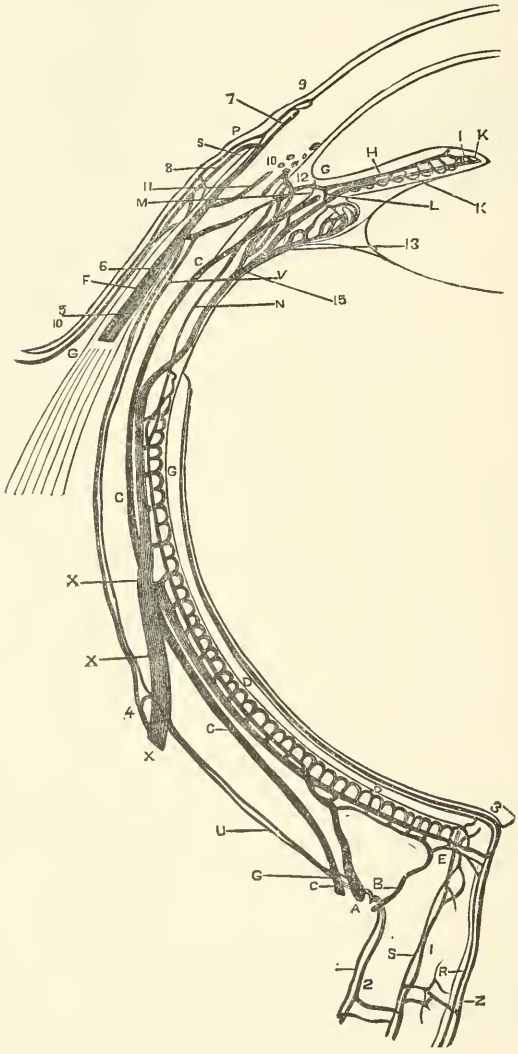


Fig. 8, Section representing the bloodvessels of the eye.—Frey.

ber of finer tubes, which form a perfect net-work of blood vessels in this region. From the latter arterioles spring the venous

radicals of the parts (18), which finally empty into the venæ vorticosæ (x), which veins pierce the sclerotic near the equatorial part of the eyeball. The vessels supplying the iris are all derived from the circulus arteriosus iridis major. They form a wide vascular net-work through the stroma of the iris, converging toward the pupil near its margin they form a new vascular circle,(the circulus arteriosus iridis minor) (i). From this, branches are still further, given off which supply the sphincter of the pupil (k), and finally merge into venous radicals. The veins of this part of the eye are nearly as numerous as the arteries; crowded close together, they unite at very acute angles to form larger branches; some of which finally empty into the venæ vorticosæ (x); others take their exit through Schlemm's canal (10). Some twenty-five or more quite large branches, mostly from the ciliary muscle (12), leave the eye at this point, where they pierce the sclera quite obliquely, and upon its surface empty into the ciliary veins (17). Hence we see, gentlemen, that this portion of the eye is highly vascular, that the blood vessels are closely packed, requiring but a slight disturbance in the anitomical parts to produce a disturbance in the circulation. Accompanying the blood vessels we find an equally complex structure of nerves ramifying and traversing these structures of the eye. The ciliary nerves, which supply the cornea, pass through the ciliary bodies, ciliary muscle, and iris, via Schlemm's canal to the cornea, about sixty in number, terminating as filaments void of their medullary sheath, finally end, according to Cohnheim, in the nucleoli of the epithelial cells of the cornea.

PHYSIOLOGY.

The office of the crystalline lens, together with the other refracting media, is to cause luminous rays to be forced upon the rods and cones of the retina. Now, in the emmetropic or typical eye, the

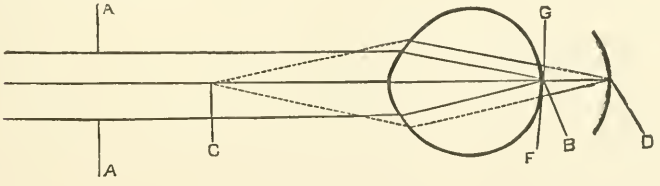


Fig. 9.

refracting media is such that parallel rays, or rays coming from

distant objects, are brought exactly to a focus upon the rods and cones of the retina (Fig. 9, a). For all other rays, viz.: those coming from near objects, which are divergent rays (Fig. 9 c), there must be some change in the refracting media. In hypermetropia, on the other hand, this change must take place for *all* rays—rays coming from distant as well as those from near objects. The refracting power of the hypermetropic eye being too low to focus parallel rays upon the retina, much less

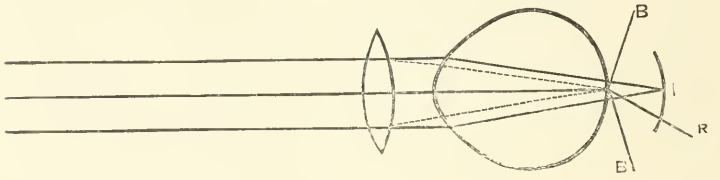


Fig. 10.

can it focus divergent rays. (Fig. 10.) This altering power, then, plays constantly in the hypermetropic eye. In the myope the eye is adjusted for divergent rays; these, only, it focuses upon the retina, and hence; for distant objects, it must make use

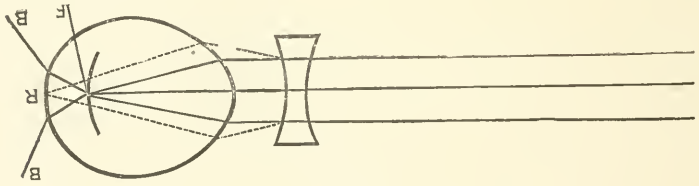


Fig. 11.

of some external power, as concave glasses. (Fig. 11.) This power *in* the *eye* is called the power of accommodation. And this power is located in the ciliary muscle; but just what its *modus operandi* is, science has not yet determined; it is evident, however, that the *circular fibres* of the ciliary muscle play a very important part in the power of accommodation; for, in the hypermetropic eye, where more than in either of the others, this power of accommodation is needed. we find these circular fibres predominating, almost to the exclusion of the meridianal (Fig. 7), while, in the myope, who has little use, if any, for this power, the meridional fibres predominate over the circular. (Fig. 6.) In the emmetrope the two sets are more nearly equal. This reasoning concerning the use of the accomodation power, depends

upon the fact that, as a rule, people are more engaged with near objects than with distant.

ETIOLOGY.

This brings us to the etiology of glaucoma, for I wish to take the position, gentlemen, that hypermetropia, and its first cousin, presbyopia, if not the original causes of glaucoma, are at least *largely*, almost *infinitely* concerned in its development. Let me emphasize, gentlemen, by repeating the structure of the hypermetropic eye. In hypermetropia, as we said, the refractive power of the eye is too low or the antero posterior axis of the eyeball is too short, so that when the eye is in a state of rest, parallel rays are not united upon the retina, but behind it. (Fig. 10.) To remedy this condition, in order that the hypermetrope may be able to get a clear image of the object, the eye undergoes a change in its power of refraction sufficient to unite the rays upon the retina.

"The less the power of refraction of the hypermetropic eye, the greater must be this effort of accommodation and it must increase, of course, proportionately, as the object is brought nearer to the eye." Hence, we see that the hypermetrope is using his power of accommodation all the time, whether he is looking at near objects or at those at a distance; there is, then, a *constant strain* of accommodation. The ciliary muscle and processes are constantly at work, so long as the individual is regarding *any* object, be it *near* or *distant*. Hence the reason of the circular fibres and ciliary processes of the hypermetropic eye being so much more developed than those of either the emmetropic or myopic eye. Let us notice what takes place in the act of accommodation. The pupilary margin of the iris moves forward, while the ciliary margin is drawn outwards towards Schlemm's canal, the anterior surface of the lens becomes more convex and advances toward the cornea, the anterior chamber becomes more shallow, and its contents (aqueous humor) either become more dense, or escape more freely through some channel, probably Schlemm's canal. The office of which canal, doubtless, is to transmit the fluids of the chambers of the eye; thereby allowing a constant change in these fluids of which, reasoning from analogy, there is a necessity in order that the eye may remain in a healthy condition. We are led to this belief by the fact that, under special conditions, there is a very copious secre-

tion of the aqeuous humor as, for instance, after the operation of paracentesis of the cornea and of iridectomy in which the chambers are evacuated, and the cornea collapses; in a few seconds the humor is re-established, and the cornea resumes its normal curvature. This copious flow presupposes a secreting membrane (Descemet's membrane) which, to be in a healthy condition, must be active, and the supply constant. Consequently, the drain must also be constant. This drain must be either by the process of exosmosis, or through some canal or duct. The sclera and cornea are both dense structures, and the exosmosis through them would be slight. Just at their junction, as we have seen, is Schlemm's canal, opportunely situated for this very work of draining, hence we are *presumably logical* in *concluding* that *this is* its *function*. Presbyopia is not an anomaly of refraction, but, of accommodation. It is a condition which appears in every emmetropic and hypermetropic eye after a certain period of life. In the emmeotropic eye it appears at the age of forty-five years; in the hypermetropic it may appear much earlier.

What is presbyopia? It is simply an arrest of the power of accommodation; an insufficiency upon the part of the ciliary muscle to perform its function. For a certain number of years we are able to see near objects as well as those at a distance. Whenever we want to look at a near object, the little ciliary muscle, springs into action, renders the lens more convex, adjusting it so as rightly to focus divergent rays upon the retina, and we get a clear image of the object; but, after a certain number of years this muscle, which is almost constantly called into use in the emmetrope, because as a rule we are largely employed with near objects, and in the hypermetrope is used *without* cessation, becomes tired (in common parlance), and refuses to perform its function, and the individual experiences a corresponding dimness of vision. You may readily see, gentlemen, that if this condition is allowed to go on without being corrected by the proper glasses adjusted, some lesion is almost sure to arise. As a further evidence that this condition is due to weariness of the ciliary muscle, I would call attention to an occasional phenomenon termed by the laity "second sight." By the use of glasses the muscle is relieved of its work, and after resting for a period of time, (several years) its power is re-established, and the person is able to read even the finest print with

the naked eye. An instance of which I had a few days ago in the testimony of a patient nearly eighty years of age. He had used glasses for nearly twenty years, when he was able to lay them aside, and read fine print with the naked eye.

This lesion, the direct result of the strain of the power of accommodation induced by hypermetropia and presbyopia, at least sets with a wonderful impetus toward glaucoma. And here allow me to suggest, gentlemen, the importance of every physician being able to recognize these anomalies, and to correct, or have them corrected before the complications arise.

What is glaucoma? Glaucoma, as I believe, is a disease in which there is an obstruction of Schlemm's canal with some lesion in the ciliary region, which is peculiarly liable to be disturbed here on account of the very complicated net-work of blood vessel and nerves entering and leaving the eye at this point.

SYMPTOMS OF GLAUCOMA.

1. Increased tension of the globe.
2. Rapid increase of any pre-existing presbyopia.
3. Venous hyperæmia.
4. Dilatation and sluggishness of the pupil.
5. Cloudiness of the aqueous and vitreous bodies.
6. Periodic dimness of sight.
7. Appearance of a halo of prismatic colors about a light.
8. Contraction of the field of vision.
9. Ciliary neuralgia.
10. Anæsthesia of the cornea.
11. Scotomata.
12. Arterial pulsation at the fundus of the eye and cupped disk.

Von Graefe has divided glaucoma into four stages:

I. Premonitory—Glaucoma imminens, where many, or even all of the above symptoms may appear, though with intermissions, and in a less marked degree than in the second stage.

II. A fully developed stage—Glaucoma evolutum.

III. The third stage he terms Glaucoma Consummatum, a stage in which quantitative perception of light has been completely lost for some time.

IV. The fourth stage is where the eye undergoes glaucoma-

tous degeneration, and instead of the eyeball being over tense, the tension often falls much below the normal.

SYMPTOMS.

Considering the different symptoms as given, we shall endeavor to show clearly the relation between cause and effect.

Taking them in the order given:

First symptom—the patient complains of a fullness of he eyeball, as though the globe was too large for the orbit, and upon examination we find that the tension is considerably increased; the pressure made upon the globe with the eye closed and directed downwards, reveals the eye as hard, varying from a slightly perceptible increase to thatof stony hardness, according to whether the disease has reached the first, second, or third stage. Now to

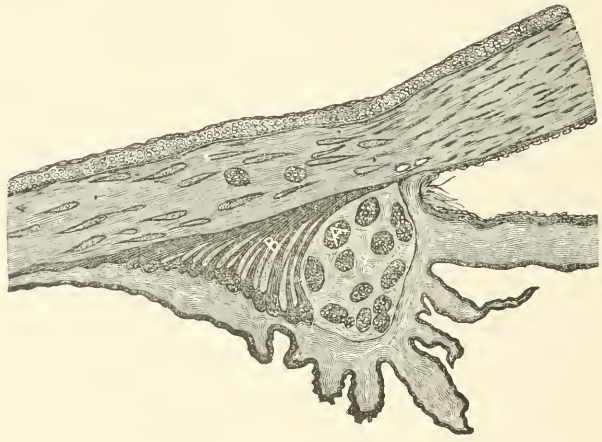


Fig. 14. Section of a glaucomatous eye in ciliary region.—Tiffany.

what is this increase of intra ocular tension due? In the physiological eye we know that there is a constant escape of the aqueous fluid; probably through the canal of Schlemm. In the glaucomatous eye (Fig. 14) we find the following conditions, viz.: swelling of the ciliary processes, hypertrophy of the ciliary muscle, adhesions of the iris to the cornea, obliteration of Fontona's spaces, and consequently obstruction of Schlemm's canal; as a result of which we have an accumulation of fluids, or intra-ocular tension; and upon *this*, gentlemen, hang all the other symptoms.

Second symptom—rapid increase of any pre-existing presbyopia. The patient finds it necessary to change his glasses

very frequently for stronger ones? What does this mean? It means that the ciliary muscle is becoming involved, and is *rapidly loosing* its power of accommodation.

Third symptom—Venous hyperæmia. The anterior ciliary veins become engorged and tortuous, which is simply due to the intra-ocular tension which impedes the circulation.

Fourth symptom—Dilatation and sluggishness of the pupil. Upon examination we find that the pupil is more or less dilated, according to the stage of disease, and does not respond readily to the stimulus of light.

To what are these conditions due? In our anatomical review we found that the motor nerves supplying the circular fibres of the iris, viz.: branches of the *third* pass through the ciliary regions; hence, with the other structures, they become involved, and consequently lose their functional power, leaving those which supply the radial fibres, viz.: sympathetic, to gain a preponderanceof power and thus produce dilatation and inactivity of the pupil.

Fifth symptom—Cloudiness of the aqueous and vitreous humors. The aqueous humor is found to contain leucocytes, epithelial cells with more or less granules of pigment. The patient complains of seeing specks or cobwebs floating before his eyes. Upon examination, the vitrious is found to contain pigment, corpuscles, and striæ floating about, showing that some dissolution of the ciliary processes or choroid, or both, has taken place; originally due to the lesion in the power of accommodation and obstruction of Schlemm's canal.

Sixth symptom—periodic dimness of sight. The patient in the premonitory stage, often complains of periodic dimness of sight. This is probably due to temporary disturbance of the intra-ocular circulation. This dimness can be easily produced by merely pressing upon the globe (thus) showing that a very slight disturbance of the intra-ocular circulation will affect the vision.

Seventh symptom—The halo of prismatic colors around the light. This is one of the most constant symptoms of glaucoma, especially in the earlier stages. The outer part of the ring is red, the inner bluish green. "This halo is only seen when the pupil is dilated, and it is probably due to a diffraction of the rays of light owing to a change in the refracting power of the lens," especially at the periphery, or that portion nearest the ciliary

region or seat of the disease. Hence, we refer this symptom to the lesion of the ciliary muscle.

Eighth symptom—Contraction of the field of vision. The field of vision is usually greatly limited. The contraction usually beginning in the equatorial portion of the globe, going on to such an extent that the patient will describe his limitation of vision as if he were looking through a tube. The most probable reason of this limitation of the field of vision beginning in the equatorial region *is*, that this is the portion of the retina nearest to the seat of the disease (ciliary region), and also that the venæ vorticosæ leave the eye at this part.

Ninth symptom—Ciliary neuralgia. This symptom in the acute form of glaucoma is *always present* throughout *all* the different stages. The patient complains of a *sense* of aching and a tightness of the globe, with pain extending toward the right orbit, over the brow, through the temples and down the nose. "The pain is *most severe*. Sometimes of an almost madning character; but the most *intense* agony is often felt in the back of the head;" this is usually accompanied with severe vomiting, assuming the character of a bilious attack, for which by the superficial observer, it might be taken. This ciliary neuralgia is undoubtedly due to the pressure upon the ciliary, and branches of the trigeminal nerves as they pass into the eye and through the ciliary region.

Tenth symptom—Anæsthesia of the cornea. This is quite a frequent symptom of glaucoma, especially in the chronic form. The cornea becomes so anæsthetic that it can be touched with the finger or brush without occasioning the slightest pain. We have seen that the nerves supplying the cornea pass through the ciliary region, a sufficient explanation for this phenomenon.

Eleventh sympton—Scotomata, or blind spots, of which the patient occasionally complains, is usually due to hemorrhagic patches upon the retina, referable to the intra-ocular tension.

Twelfth symptom—Arterial pulsation at the fundus of the eye and cupped disk. These symptoms, which the opthalmoscope may reveal, provided there is not too much cloudiness of the refracting media of the eye, are quite pathognomonic of glaucoma. The glaucomatous cup involves the whole optic disk (Fig. 12 & 13), while the physiological cup is simply a shallow depression confined to the center of the optic disk. In the glaucomatous cup the margin is abrupt, sharp, and often excavated,

and as tl e vessels curl over its edge, they appear interrupted or distorted. (Fig. 12.) The optic disk is usually encircled by a

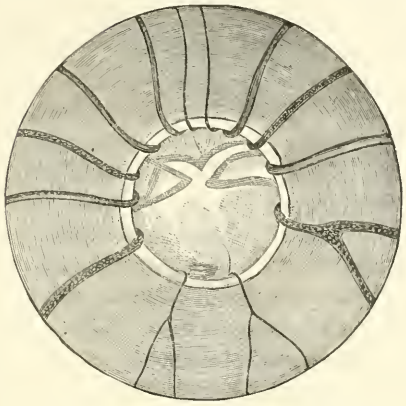


Fig. 12. Glaucomatous cup.—Noyes.

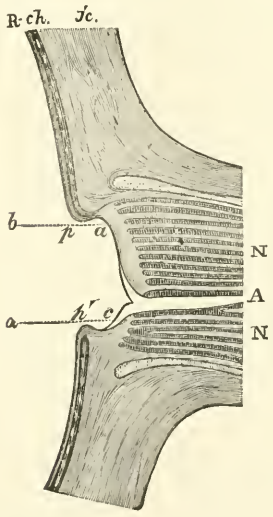


Fig 13. Profile view of Glaucomatous cup.—Noyes.

light colored band, which is due to the sclerotic shining through the atrophied choroid. At the margin of the disk, where the blood vessels wind up over, a distinct arterial pulsation may be seen either spontaneous or caused by a slight pressure upon the globe, which is synchronous with the heart's beat. The cause of these symptoms is evidently intra ocular tension, and the reason of

their location may be explained by the fact that the foramen-opticum is located at the fundus of the eye.

THE COURSE OF GLAUCOMA.

If it is of the acute form, the course is often rapid, destroying the vision in a few hours.

"In the chronic form the course of the disease is slower, and may extend over a period of years, but it is steadily onward, and if not relieved by timely treatment, sooner or later dooms the eye to irremediable blindness."

Before proceeding to the treatment of glaucoma, I would note the fact that primary glaucoma sometimes attacks the myopic eye. This I believe to be due to the *same cause* as in *hypermetropic* and *presbyopic*, easily explainable in the fact that the myope frequently uses his glasses adjusted for distant objects, in reading, thereby necessitating a demand upon the accommodative power, which, as we have seen is, by nature, weak in the myopic eye, and easily overworked.

TREATMENT OF GLAUCOMA.

In glaucoma imminens, or earlier, a prophylactic treatment is often effectual.. The anomaly of refraction or accommodation is to be corrected by the proper adjustment of glasses. *Eserine* I have found, also, very useful. Its preventative action is as follows:

It contracts the pupil, and thereby draws the iris away from Schlemm's canal, and permits again the free escape of the aqueous humor, and so relieves the intra-ocular tension.

All use of mydriatics should be avoided, as their action is diametrically opposed to the desired results. They dilate the pupil and thereby draw the iris back more completely, closing the canal. Indeed, the use of mydriatics, from this very action, may induce glaucoma. When the disease is once established, as in glaucoma evolutum, there is but one treatment which offers any assurance of permanent cure or relief; and that is iridectomy or sclerotomy. The results of these operations in acute glaucoma have been most brilliant. In the chronic form they will arrest the progress of the disease. And if made in the earlier stage, will often restore a portion, if not the entire amount of sight lost. In the acute form the operation should be made as soon as possible after the *prodromal* stage has set in; for every

hour delayed is most valuable time lost, for, as we have seen, this form of the disease often runs its course in a few hours, reaching the form of glaucoma absolutum, a stage in which quantitative perception of light is comletely lost. Paracentesis, and other operations, have been recommended for glaucoma, but their effect is only temporary or transient, as they do not remove the cause of the intra-ocular tension. Iridectomy, or sclerotomy, is efficient in doing this, as in either operation the incision is made through the sclera at or in close proximity to Schlemm's canal. The wound, uniting, acts as a filter for the fluids, for a time at least, until the canal has fully regained its function. Of the two operations, iridectomy and sclerotomy, I prefer sclerotomy, for the following reasons, viz.: It accomplishes the desired results with a greater degree of certainty. It is less dangerous to the iris and crystalline lens; it does not disfigure the pupil, causes much less pain, takes less time and instruments, and is easier made. The steps for making this operation, are as follows:

1. One grain of sulphate of eserine to an ounce of dilute water must be droped in the eye before the operation
2. The operation, if possible, should be made without narcosis.
3. Section, may be made upwards or downwards.
4. Enter the sclera with Von Graefe's knife at one m. m. from the edge of the cornea, as if about to make a scleral flap. (Fig. 15.)
5. When the knife has made the counter puncture, it is to be pushed slowly forward, and the operation ended if possible by the withdrawal of the knife, which should be done very slowly.
6. Flap is not to be completed, but the apex is to be left. (Fig. 16.)

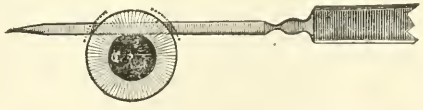


Fig. 15.

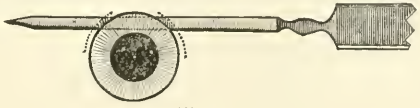


Fig. 16.

7. Eserine must again be dropped into the eye and a bandage applied.

The authorities consulted in writing this article are Frey, Satterthwaite, Wells, Lawson, Noyes and Abadie.

Translations.

FROM THE FRENCH.

Article XXXVII.

Excerpts from Late French Journals. By S. Pollak, M. D., of St. Louis.

Translated for the Journal.

Action of a Mixture of Vapor of Chloroform and Air. By Paul Burt.—Experiments made by him on dogs: 10 gm. chloroform diluted in 100 lit. of air caused anæsthesia, but 20 gm. chloroform diluted in 100 lit of air caused death. With an especial apparatus he succeeded in proving the effect of a continuous inhalation for, 10 hours, of such a mixture.

2 gm. chloroform in 100 lit. of air produced no noteworthy symptom.

4 gm. chloroform in 100 lit. could be inhaled for 9½ hours without any disturbance or lowering of sensibility, except the temperature, which dimished 4–50.

6–7–8 gm. chloroform in 100 lit. of air, effected an appreciable though very slow dimunition of sensibility, temp. decreases, and with 30° the animal died.

10 gm. chloroform in 100 lit. of air, rapid anæsthesia, death 2 to 2½ hours. Temp. 33°.

14 gm. in 100 lit. of air, death in 1½ hours.

18 gm., death in 25 minutes.

20 gm. in 100 lit. of air, sudden death.

Temperature falls always in proportion to the duration of the experiment. The action continues to the last moment. Not all animals are alike sensitive to the effect of chloroform. The following are his conclusions:

Continuous chloroform will always cause death. Animals weakened from a loss of blood succumb sooner.

In order to chloroform helplessly and harmlessly a dog, give at once a toxic dose (12–14 gm. chloroform in 100 lit. air), but as soon as sleep ensues continue in much smaller doses. (3–6 in 100.)—*Gaz. des Hop.*

PHYSIOLOGICAL EFFECT OF IODOFORM. By M. RUMMO.—Reported to the Academy of Science. The results of experiments on mammals and frogs are the following:

1. Progressive diminution of the number of ventricular contraction of the heart; increase of energy of the ventricular systole.

2. Respiration remains normal under small doses; but large doses cause first an increase, then a decrease, and finally a total arrest of respiration.

3. Moderate doses increase the temp. 1–2°; large doses bring about a temporary increase, followed by a lowering of 4–5°, in spite of tetanus.

4. Local anæsthesia, general malaise, diminution of muscular and nervous sensibility and of reflexes, especially in the members injected, then general rigidity, which persists even after division of spinal column.

5. Large doses cause nausea, vomiting, dysenteric discharges and marasmus, and all symptoms of iodismus.

6. As an antiseptic, iodoform does not destroy the germ in putrescent matter, but may prevent their development. But desolved in oil of turpentine, it will destroy bacteria in their fullest proliferation.—*Revue Scientifique.*

DECENTRATION OF THE EYES. By M. JAVAL.—Some eyes are congenitally decentrated, which defect is corrected by the pupils, by their spontaneous contraction and dilatation.

M. Poncet observed, in connection with the above, that there may exist a compensating strabismus to correct certain optical defects of astigmatism. It is very important that the surgeon should understand this, and not be induced to perform an operation for strabismus.—*Gaz. des Hopitaux.*

COLLATERAL INNERVATION.—*M. Richelot* refers to this, at the occasion of a resection of the median nerve. It is well known that sutures made on nerves of man, are negative of a functional result. Yet it some times occurs that, in wounds of nerves, not only sensibility, but (rarely) also motility persists, in consequence of collateral innervation. A man aged 26 suffered from neuroma of the median nerve, in consequence of a complicated fracture, when three years old. The patient suffered atrociously from neuralgia. R. resected the neuroma and divided the med-

ian nerve. After the operation, not only the sensibility of the innerved region, but also the muscular movement depending thereon, remain intact. What is the reason of this phenomenon? The preservation of sensibility is easily accounted for; but not so the muscular movement. This would indicate that nerve sutures should be practised, to aid at least in part in the possible regeneration of the nerve.

Vernenil observed, that functional integrity of the sensibility does not always imply anatomical integrity of the nerves.—*Gaz. des Hospitaux.*

PROFESSIONAL ARSENICISM AND DOMESTIC ARSENICISM. By DR. A. FERRE.—Poisoning by arsenic is not always the result of a culpable act, of a sad error, or imprudence; there are circumstances where a man can find himself in the presence of poison without having the least suspicion of the danger he is in. Dr. F. divides his instructive work into two parts:

1. *Professional Arsenicism*, in which he refers to all industrial pursuits, where the toxic arsenical agent is unknown to its victims. The poisoning may assume an acute or chronic form, according to the accidental or permanent character of the operation. It manifests itself with the workers with impure zinc, with the commercial sulphuric acid, charged with pyrites, the blue of cobalt, with aniline colors. A very interesting chapter is that which deals with poisoning with arsenious hydrogene of chemists in their laboratory, or the latent arsenicism of the operatives of high furnaces. He also speaks of poisoning resulting from manipulating arsenicous substances; he enumerates the incidents due to the cutaneous action of arsenious dust, and their penetration into the organism by absorption.

2. *Domestic Arsenicism* refers to cases which occur in houses where the inmates are brought in contact with objects, the composition of which contain arsenic, of which there are three divisions. In the first he ranks the toxic influences of highly decorated dwellings having wall paper of green, or yellow brown tint.

In the second division he places the cause of intoxication in the vestments. He cites numerous cases of poisoning from gauze robes or tarlatans, the dye of which is attached by a gummy substance, which becomes detached in shape of a fine but dangerous powder, which provokes painful and rebellious erup-

tions; in stockings or flannel chemises of magenta and solferina colors; of headdresses of artificial flowers or leaves; of false jewelry of mountain green or malachite.

The third division comprises alimentary articles, which cause grave gastro-intestinal trouble, such as pastilles, or bonbons dyed arsenicus green; pastry ornamented with flowers and leaves of fuschine; chocolates, groceries and fruits wrapped in colored paper. Wines, syrups, cordials of fuschine color. He terminates his valuable work with instructions by which these miserable substances can be easily recognized; he appeals to public authority or sanitary commissions, to suppress by legitimate means the commerce of these articles, so perilous to health.—*Le Progress Med.*

The *Tribune Medicale* contains the very interesting communication of Dr. Burg to the Biological Society, about the *immunity of copper workers from contagious diseases* during epidemics of cholera and typhoid fever. Of forty thousand such workmen, two only died during each of the epidemics of typhoid fever in 1876 and 1883. The statistics of a society of three hundred members, all copper workers, showed that during the entire period of the existence of the organization of sixty-four years, there had been but three deaths from epidemic diseases among its members.

IODOFORM DRESSING.—M. Paul Berger made a critical study of it in order to point out the obscurities of the question. One fact he has clearly brought out, i. e., the eminently antiseptic action of iodoform, the manner in which it dries up the secretion of wounds, preserves all putrid transformation, and induces repair. It may be said there is no more precious agent in the treatment of wounds, if we could divest ourselves of the fear, of the accidents which its injudicious use either in its form, or variable intensity, may cause. In order to take rank with Listerism, it is absolutely necessary that the nature and conditions of iodoform intoxication be better defined, until thoroughly understood. Until then it must be used with great caution. It may, however, be stated that: Iodoform is an efficient antiseptic; it prevents all putrid transformation of wounds which it covers; it diminishes suppuration, and favors secondary repair.

Although it does not prevent union by first intention, when interposed between the edges of the wound, yet it manifests

irritating properties by reddening the margins. It was thought that it may induce erysipelas, but that has not been proven.

Iodoform dressing is eminently a rare dressing; it should not be renewed but every fifth or sixth day at furtherest, until every trace of iodoform has disappeared from the open wound. The dressing is made with crystalized iodoform being placed directly upon the wound, or incorporated in a layer of gauze with which it is covered. The essential condition of its efficacy is, that the entire traumatic surface be brought in contact with the iodoform. Preparations where iodoform is associated with an excipient: vasaline, gelatine, cocoa butter, are less reliable. Iodoform is especially of great service, where Listerism is inapplicable; in the mucous cavities of the mouth, rectum and vagina, in tortuous and irregular wounds; and finely in septic wounds.

Iodoform appears to possess particular properties against fungous and tuberculous growth; hence it is especially indicated, in operations and tissues affected with fungi or tubercles; the ablest physicians deem it indispensable in all such cases.

Iodoform brought in contact with wounds, is absorbed by its surface, and is proven by iodine being detected in the urine; nevertheless, cases of true intoxication are exceptionally met with, which are characterized by loss of appetite, small and frequent pulse, and rise of temperature. In grave cases violent delirium precedes the final collapse, and with children, symptoms of meningitis.

Many unfavorable results have been falsely attributed to iodoform. There are conditions which favor intoxication, such as an exagerated use of it, in consequence of a large surface, advanced age and a debilitated subject, but which can be avoided by timely stopping the use of it.—*Revue des Science Medicales.*

NEW REASONS FOR WOMAN'S NURSING.—A new element has been discovered by M. Béchamp in woman's milk, hitherto unknown, which in a striking manner dissipates the obscurities of the empiricism on certain points of maternal nursing.

It results that woman's milk differs essentially from the milk of the cow and the ass, not only in density, the quantity of milk sugar, of butter, of salt and water, but by the presence of a special and specific ferment, which modifies considerably its digestive qualities or digestibility.

This ferment is called *zymase*, its history is closely connected

with that of the microzymas,, which biologists consider an integral part of all normal tissues. These microzymas, when diseased, are converted into bacteria and give rise to diseases in general.

The zymase of woman's milk possesses the property of saccharifying the starch, a phenomena for the first time signalized, and which is not produced in the milk of the cow, the ass, or other mammalia.

Cow's milk contains, besides caseine, two distinct albuminoid materials; one of these remains soluble in water, after having been precipitated by alcohol; this is the *galactozymase*, a substance capable of solidifying the starch of the feculæ, but without saccharifying the amylacious material, while zymase of woman's milk saccharifies the feculæ.

In order to test the saccharifying property of zymase, proceed as follows: Woman's milk being normally alkaline, acidify mildly with acetic acid, add at least three times its volume Alcohol of 90°. The very voluminous albuminous precipitate is collected in a filter, washed with dilute alcohol (in order to remove the milk sugar), and again with ether (in order to remove all fatty matter), and again add distilled water. After filtering, the solution possesses in the highest degree the property of fluidifying and saccharifying the feculent starch.

The results are always the same, whether the milk had been long in the breast; or the milk taken immediately after nursing; or after it had nursed a second time, or even half an hour later.

Consequently, woman's milk contains an entirely different zymase than cow's milk, and since the milk taken in different stages of nursing is endowed with the same activity, it must be clearly a natural product of the mammary gland, and not the result of a chemical change in the milk, in consequence of stagnation in the gland.

This discovery has an important physiological and pathalogical bearing upon the specificity of the organs, and upon the idiosyncracies of the nurse. It demonstrates that the secretory produced of a glandular organ of a similar anatomical character, differs according to the species and object to be attained, without depending absolutely upon its texture.

The practical consequences of the discovery that the zymase of woman's milk is capable of saccharifying the starch will not be slow to make itself felt in the practice of nursing.

In the first place, it is evident that woman's milk can not be replaced by any other milk, whether of the cow, ass or dog. They are far removed from the milk of woman. The same may be said of the innumerable formula of artificial feeding.

In the second place, in the faculty of saccharifying starch of woman's milk, is found the explanation of the ancient usage of feeding of infants. Most of the preparations contain farinacious or starchy matter. A nursing of 50 grammes gives enough zymase to make 40 centigrammes of gluten. The zymase, and the saccharifying action of the saliva and the pancreatic fluid, shows a nursing infant has three secretory products, capable of transforming the starch into glucose in a manner to facilitate its absorption.

The following are the conclusions reached:

1. Woman's milk contains a ferment of a nature to saccharify raw or boiled starch.

2. The specificity of woman's milk is due to the presence of zymase, which makes it preferable to any other.

3. No equivalent can be found in the milk of cows, asses or dogs.

4. The milk of domestic animals may be taken, pure or mixed, in want of woman's milk, but it is never worth as much.

5. Infants should be breast-nursed in preference to all other kind of feeding.

6. When infants have arrived at the age of taking feculent food, woman's milk may still be useful in aiding in transformation of starch into sugar.—*Paris Medicale.*

THE BACILLII OF TUBERCLES.—M. Cochez communicates to the Biological Society that in his investigation he found bacillii in the expectorations of phthisis tuberculosus, that their number gives precise indication of the epoe and progress of the disease; that they do not exist in the expectorations of any other disease, and he affirms, where there are no bacillii, there are no tubercles; and finally, that expectorations wnich contain bacillii are virulent.—*Gaz. des Hopitaux.*

CARIES OF THE LARYNX IN TYPHOID FEVER.—M. Gouzuenheim presented a pathalogical specimen, which was derived from a typhoid fever patient who became aphonic early. At the autopsy the larynx showed a caries of the arytenoid cartilages; the

vocal cords were entirely destroyed, there was a tuberculous infiltration in the folds of the aryteno-epiglotis.—*Gaz. des Hopitaux.*

AXILLARY HYPERHYDROSIS OF NUDE PERSONS.—With most persons the axillar cavity becomes moist under the influence of nudity, even to the accumulation of a drop. M. Anbert thinks it is due to an elevation of temperature in the axilla, in consequence of a general lowering of temperature by reason of the nudity. He never uses the axillar thermometer in his clinic.—*Paris Medical.*

INSUFFLATION OF IODOFORM IN CHRONIC OTORRHŒA.—Dr. Coeraly Perez states that he uses insufflation of iodoform in all cases of Otorrhœa, especially those in sequence of scarlatina and roscola. He cleanses the ear first with injection of phenic water, dries it carefully, and insufflates finely pulverized iodoform quite liberally for three or four days. Then he washes it again with alcoholic water, dries it, and returns to the insufflation of iodoform until the flow is arrested.—*Revista Medica de Sevelle.*

AN ADJUVANT TO CHLOROFORM.—M. Daster experimented to increase the effect of chloroform, while at the same time he diminishes the danger by preceding its administration by a hypodermic injection of the following mixture:

Aq-destil, 10 grams.

Muriate of morphine, 10 centegrams.

Sulph-atropine, 5 milligrams.

One gramme of this injected prior to chloroformization, a very calm anæsthesia is brought about.—*Gaz. Medicale de Nanets*

Article XXXVIII.

FROM THE GERMAN.

Excerpts from Late German Journals. By S. Pollak, M. D., of St. Louis.

Translated for the Journal.

Woodwool, a New Dressing Material. By P. Burns.—P. B. uses in his clinic in Tübingen, the woodwool, as being better and cheaper than gauze or cotton wool for antiseptic dressing of wounds. (B. prefers the sublimate antisepsis to the phenol antisepsis.) *Holzwolle* or woodwool is made by paper manufacturers, by grinding up fir wood. Woodwool is a very white, delicate, loose, elastic material, possessing great absorbing property of fluids, which dessicate very fast, and can therefore be used for a long time.

The sublimated woodwool is used by first irrigating the wound with 1 per cent. of corrosive sublimate in order to disinfect it, drainage tubes are added, the wound is closed and covered with a gauze, then a sufficient quantity of woodwool, either in a gauze envelop, or direct upon the wool.

Results were in the highest degree satisfactory. The chief advantage, however, consist in their being able to be kept *in situ* unchanged for days and weeks.—*Berlin Klin. Wochenschrift.*

Interesting Results from External Application of Argentum Nitricum in Facial and other Neuralgies. By Dr. Bd. Baumueller.—After having tried various remedies against arthritis and neuralgies without an satisfactory result, it occurred to him to use the argentum nitricum, from its property of causing an *exudation* beneath the epidermis; He was not disappointed.

The application is made in the following manner: Dip a finger in water and moisten with it the painful spot of a joint in arthritis, or in neuralgia the spot nearest the place of exit of the nerve from the bone. Rub, then, on it vigorously, a crayon

of nitrate of silver for about one minute. After a few minutes the skin will appear dry. Cover it with salicylated cotton, and leave it undisturbed for 24 hours, when the surface has to be cleansed and the dressing removed until recovery ensues.

This treatment has been tried in arthritis of the joints of fingers, toes, elbows, shoulder knee and hip, and in facial neuralgia at the exit of the nervus frontalis, and supra-orbitalis, and also of the ischiadicus. F. describes the pathalogical process immediately after energetic cauterization with arg. nitr. of a moist surface, a severe burning follows, and after 12 hours an abundant exudation is seen under the eschar, which, after 24 hours, became quite turbid. The exudation contains a large number of white blood corpuscles, only a few red ones, some pus corpuscles, no urinary salts; blue litmus paper is not reddened. The wound contains a much swollen papilomatous body, which bleeds readily. The peripheral nerves are not injured by it, it is by the papilomatous body and the exudation which reaches the inflamed neuritema that cure is effected.—*Memorab. '83.*

STATISTICS OF THE MORPHINISMUS. By BURKART, of the John Hosp. of Bonn.—He reports his results in chronic Morphinismus, by *gradually* withdrawing the use of it, at the Hydropathic Institute in Marienburg. Of 144 cases, 100 obtained temporary relief, 44 no relief at all. 21 procured the drug on the sly, 23 were otherwise interfered with. Physicians furnished over 39 per cent of the whole number. Of the relapses, they furnished more than 58 per cent. In 8 instances both man and wife carried on the morphine abuse. The daily dose was from 0.02 to 3.0 of morph. muriaticum or sulphuricum. A good result by gradual withdrawal is in perfect proportion to the daily quantity and the length of time the narcotic had been used. Although dangerous complication may, and do sometime follow, to the use of small doses taken only a brief time, such as albuminuria in a higher or lower degree.—*Deutch Mediz. Wochenschr., '83.*

THE USE OF IODOFORM IN DISEASES OF THE EYE. By DR. LANDESBERG.—Dr. L reached the same results with it as other observers. He applies it in the form of iodoform-oleate, *i. e.*, 5 per cent solution of iodoform in aoleicum, or with cosmoline, which makes a homogenous preparation. It is used in neuro-retinitis in consequence of loss of blood as an unguent, and also

in pills 0.12 four times a day. He found it also useful in herpes cornea, in pannus, and Xeropthalmia.—*Ctbl. f. Prak. Augenheilkunde.*

FAVORABLE RESULTS OF COLOR CULTURE UPON THE EYE. By DR. KROLL.—He found, on examination for color blindness of the inhabitants of Crefeld, that the percentage of color blind men was only 6 per cent. (usually 3 per cent). He accounts for it that the silk and velvet industry has been carried on there for two centuries, and the accuracy to distinguish the finest shades of color is a specialty. The same conclusions have been reached by Magnus.—*Ctbl. f. Augenheilkunde.*

PATHOLOGY AND ETIOLOGY OF XEROSIS EPITHELIALIS CONJUNCTIVÆ, AND HEMERALOPIA IDIOPATHICA. By DR. KUSCHBERT.—K. observed, in an orphan asylum of Breslau, an endemy of xerosis and hemeralopy (of 80 children, 25). None of the usual causes, such as defective light, improper food, viciated air, etc., predominated there. He sought for the cause on the conjunctiva itself, and found a deposit of *Bacilli* on the same. He does not state what the treatment was; but it may be assumed it was an antiseptic remedy.—*Bresl. Med. Ztschr '83.*

NEUROPARALYTIC KERATITIS. PROF. KAHLER.—Prof. K. maintains the theory of neuropathic nature of an ulceration of the cornea when accompanied by a disease of the trigeminus. He had under examination a woman with facial paralysis of the right side, and complete lagophthalmos of a years standing, without the least opacity of the cornea. Only after symptoms of a disease of the trigeminus set in, a small ulcer on the lower aspect of the cornea showed itself, which resisted treatment, and ultimately led to Phthisis bulbi. An osteo sarcoma was diagnosticated, which was confirmed by the developement of a large tumor in the fossa auriculo maxillaris.—*Prager Med. Wochenschrift.*

Proceedings of Medical Societies.

Article XXXIX.

ST. LOUIS MEDICAL SOCIETY.

Taken by the Journals' Stenographic Reporter.

Saturday June 16th., 1883.

Dermoid Cyst.

Dr. Guhman.—I have a specimen here which I wish to present to the society, and I will give a brief history of the case. I was called on June 5th, to see a lady who was in labor with her ninth child. The midwife in attendance informed me that there was an obstruction within the pelvis, and that the child would not come down. I made an examination and found a soft mass projecting in the posterior part of the vagina, which was pushed down with every pain, and the advancement of the child's head. I waited a while and then put on my forceps and made slight traction until the child had engaged in the anterior strait of the pelvis. I found when the pain came that the tumor was pressed in my forceps between the child's head and the lock of the forceps, so much so that I was afraid my forceps would slip from the head, and not knowing the character of the tumor or obstruction, I removed my forceps and at every pain I tried to keep the tumor back, to allow the child's head to slip through, however, that failed. Once during the expulsive pain the tumor was passed down almost to the outlet, when the mucous membrane of the vagina slit through the middle like a piece of paper and the tumor fell down and hung down on the outside of the vulva. It was vascular and translucent like a bag of water. Between the pains I followed the tumor up to the vagina, and I found a pedicle to it, which relieved my mind a good deal as to the character of it, as before I did not know whether it was a hernia of a dilated part of the colon or not. However the next pain brought away both the pedicle and the child. After separating the child from the mother and removing the placenta,

I examined the tumor and found upon opening it that it was a bag filled with a yellowish, grumous fluid. Upon a further examination of the sac I found within the wall of the tumor a hard substance, which after cutting down upon proved to be a piece of flat bone. Before I left the house I made an examination of the woman—of her rectum and vagina, and found a rent along the posterior part of the vagina and that the colon was exposed; but she was not injured otherwise. The woman did very well and has had no fever or any bad symptom. The tumor has contracted a good deal—it was about the size of the child's head. I have the tumor here and the gentlemen can examine it. The bone, I think it is a tooth, is still in the tumor.

DR. SCHENCK.—From the history of the case I take this to be a dermoid cyst. I think from the appearance that the hard substance is a tooth, and then the other piece of bone I am unable to say what that is. It may be a portion of the upper maxillary bone. Liquid such as has been described by the doctor is very often found in dermoid cysts. They often come down from the posterior portion of the vagina, so that there is nothing unusual about that. Goddell has reported a very interesting case of the removal of a large cyst by vaginal section. Indeed it has often been recommended that the removal of these cysts be accomplished by the vagina. There is nothing unusual in the location of the cyst; there is nothing unusual in reference to the character of the contents of the cyst and there is nothing unusual in the formation. We find in these dermoid cysts a lower order of organization. We know perfectly well the view that was recently held in reference to dermoid cysts which was that this was an imperfect impregnation. It was supposed that the male furnished the means of forming the brain substance, and that the female formed the lower portion, and that the dermoid cyst wasan unsatisfied impregnation. This view is not now held. We know that they are an earlier formation.

DR. MUDD.—I think Dr. Schenck spoke of this tooth, and then, as I understood him, he said this was a portion of bone, probably the lower jaw. Is that it doctor?

DR. SCHENCK.—I did not say the lower jaw. I said it might be the upper jaw. But I did not state what it was exactly. I was not diagnosing whether it was a lower or upper jaw.

Dr. Mudd.—I simply wanted to ask the doctor whether he had found that the tissues and parts were arranged with any regularity in the dermoid cysts. We expect to find a tooth, but we we do not expect to find parts of the jaw in connection with it; or we may have hair, but we do not expect to find portions of the skin with it in these dermoid cysts. I wanted to inquire whether it was the doctor's experience that there was any such regularity of connection of tissues and bone in dermoid cysts, whether he has found that the parts maintain their ordinary relations, such as they do in the normal position of the body. Then there is another point in regard to this cyst. I understand the doctor to say that the origin of the tumor was in the wall of the vagina, and that when the wall ruptured and the cyst was protruded that there was a cavity or space behind the vagina and in front of the intestine. I don't know the history of these cases; I am not sure about the point of origin of these tumors, whether they start from the connective tissue out side the peritoneum, in connection with the wall of the vagina, or with the wall of the rectum; or whether they originate higher up in connection with the appendages of the uterus. I would like to ask in regard to those points.

Dr. Guhman.—I don't think it was connected with the appendages of the uterus. I think it was connected with the posterior wall of the vagina, somewhere about the rectum.

Dr. Schenck.—These cysts are not always connected with the ovaries, these dermoid growths. They are sometimes found connected with the eye; are they not Dr. Pollak?.

Dr. Pollak.—I have never seen one connected with the eye.

Dr. Schenck.—They are not always connected with the ovary, though that is the usual location for them.

Dr. Borck.—I merely wish to say that I think it is remarkable that Dr. Pollak has never seen a dermoid cyst on the eye. It is a very singular thing that a man engaged in the treatment of the eye should never have met with a case of dermoid cyst near the eye; as there is where we most often find them, especially in small children. I removed one not long ago from a child four weeks old; it was attached right near the eye, and contained hair and a little tooth.

DR. WILLIAMS.—Near the eye, or on the eye?.

DR. BORCK.—Near the eye.

DR. WILLIAMS.—Not on it?.

DR. BORCK.—Not on it.

DR. WILLIAMS.—I would say, Mr. President, that these cysts about the lids are not uncommon, but a dermoid cyst on the eyeball is not known so far as I know. I have seen two or three cases of dermoid cysts on the edge of the cornea; but I have never seen a dermoid tumor connected with the eye in any way; though these cysts are often met with in connection with the lids, they are seen not infrequently connected with the cornea, and usually have their origin between the sclerotica and cornea.

DR. MUDD.—It is very well known, Mr. President, that these dermoid cysts may appear at any part of the body, or almost any part, at any rate at any part where we have epithelial structures, the skin, epithelium, mucous membrane, such as the vagina, or a serous sac, but does not occur in connective tissue. The origin of these tumors is a point of some interest, and especially so in connection with the history of this case, which I think is somewhat unusual in its presentation and manner of expulsion. Then I have never seen in any of these dermoid cysts any very great regularity of arrangement of the tissue: I have not seen a tooth associated with a bone, in direct connection as if it had sprung from the bone, or as if it had any distinct and regular connection with the bone.

DR. HURT.—I would like to ask Dr. Guhman, if he succeeded in learning anything of the previous history of this patient in her several confinements, whether there was any history of any obstruction to her normal labors before or not?.

DR. GUHMAN.—The midwife had delivered the woman 6 or 7 times before and she said that nothing of the kind had ever happened before.

DR. HURT.—That fact, it seems to me, would rather indicate that this was a growth that made its appearance subsequently to the former confinement; at least it had attained a size sufficient to become obstructive to the process of labor, and hence was observed at this time; whereas on former occasions it had not

been discernable. This would rather indicate that it was something other than a dermoid cyst. Yet the character of the tumor would rather indicate something of this class of growths it seems to me. The question is, whether this morbid projection had its origin in an abnormality of reproduction which commenced with the conception of the mother of this patient, or whether it was something that had its origin in her sexual being, since she arrived as the age of fruitfulness. We know that it not unfrequently happens that children are born with some portions of multiple fœtuses or some portions of another fœtus attached to them that we call abnormalities, and how they are produced is a question of very abstruse science. That subject was very elaborately discussed, about a year ago or nearly so, before this society by Dr. Maughs and Dr. Dean and a number of others, and you will remember the question of these morbid and obscure growths about the sexual apparatus of the female was discussed. It is a very interesting one, and one that involves all the secrets of reproduction and growth.

Dr. Williams.—I wish to say that, some years ago, I saw a case of dermoid cyst behind the ear, in a young lady in Cincinnati. There was quite a large cyst over the mastoid process, and on opening it, this cyst was found to contain a large amount of hair, a wad of hair which seemed to be rolled up and apparently placed on purpose within this cyst. The hair was pulled out when the cyst was opened and there was found to be nothing else in the cyst cavity.

Urticaria.

Dr. Love.—This is an interesting subject, and suggests to me a case of a dermoid character, which I will report if there is nothing more to be said on this case. It is a case that recently came under my observation, and I will briefly report it, although I do not know that it is unique at all. And I report it with a view of receiving any suggestions or information as to the best method of relieving the symptoms which are very aggravating. It is a case of urticaria. For years she has been in excellent health until two months ago. At that time she began to suffer a good deal with dyspeptic sympsoms, irritation of the stomach, gastric irritation. Every meal produced discomfort, and she dieted herself; but each and every irritation of the stomach was followed by one of these attacks of urticaria which presented itself all

over the skin and drove the woman almost wild. I was called in and I prescribed, with a view of relieving the stomach and removing the cause; and at the same time I had to meet the discomfort of the irritation of the skin, and all the remedies that I knew of, were prescribed seriatum; the usual local applications, that I have never seen fail before, and large doses of chloral given with a view to control the irritation, all failed and my efforts to remove the cause had to be continued some time. Finally the stomach was controlled, digestion improved but the irritation of the skin has continued almost as considerable as before, and I am at a loss to know what to use to relieve the woman, and I think that she realizes that I am at a loss what to do, and I will be greatly obliged for any new suggestion or for any means of controlling the trouble.

DR. GUHMAN.—I can speak on this subject from my own experience with urticaria. And the principal thing is for this woman to diet herself. It is a very hard thing to do. I did it for four years. I didn't go out anywhere scarcely, I didn't attend the society at all. I didn't get rid of the trouble for four years. It is necessary that the patient should be dieted strictly. Patients diet themselves and go along very nicely for a time, and then they see something which they want and they eat something they should not and then go back again. I don't believe it can be relieved with medicine. I don't think there is anything in the materia medica that will cure it. I think it is well to use a cathartic and keep the bowels under control. I used to sponge myself with cider vinegar and water and then roll myself up in a sheet and resisted all temptation to scratch myself.

DR. HOLLAND.—On this subject I have an almost personal experience. We have a baby at home which we fed on a bottle exclusively up to three or four months ago, at that time my wife gave him some chocolate and the hives broke out on him, and now whenever he takes chocolate it gives him the hives. He never had it before; but it is very persistent. It was some time before we discovered the cause of the trouble, but by dieting the patient we could very easily attribute it to the chocolate.

DR. MCPHEETERS.—I would like to ask Dr. Love if he tried quinine in his case?

DR. LOVE.—Yes, sir; I gave quinine. I always do in these cases believeing that there is some malaria at the bottom of it

Dr. McPheeters.—Of course we must look to the stomach and bowels in these cases, for they are often the exciting cause; but it is a paroxysmal disease, and in my hands quinine has been as successful in the treatment of urticaria, as quinine and blue mass has been in the treatment of intermittent fever, almost. I rarely ever fail. In addition to that, for chronic urticaria, I think there is no remedy equal to jaborandi where the stomach will bear it. It acts as a diaphoretic, it acts upon all the different secretions, and at the same time it acts as a diuretic. It also acts upon the kidneys. I give teaspoonful doses of the fluid extract, and in chronic urticaria it is a very valuable remedy. In acute cases I rely more upon quinine and blue mass.

Dr. Love.—In this connection, I will state that I used quinine simply because I thought the case called for quinine. But the patient was inclined to think that the quinine aggravated the symptoms. With regard to Dr. McPheeters suggestion about jaborandi I will say that I think it a most excellent one, but I believe pilocarpine, which is the active principle of jaborandi, can be given with much greater advantage. Jaborandi is disgusting, nauseating; and I think we often fail to appreciate the disadvantage that we labor under; we forget our own interests a great many times. I think pilocarpine is better for the reason that it is much better to take. I think Dr. Guhman's personal experience has encouraged me somewhat.

Dr. Guhman.—I would like to ask if your patient is constipated?

Dr. Love.—Yes, sir.

Dr. Guhman.—I would recommend the use of Belcher's water. It is a tonic, has iron on it and it is a laxative. This in connection with a strict dieting of the patient I think is the only thing that promises any relief. In regard to quinine, I remember a patient I had at one time who had fever; I gave quinine, and the patient broke out in a rash. After a considerable time I became satisfied that it was caused by the quinine. I didn't believe it was caused by the quinine for some time, and I gave the remedy in several different forms so that the patient couldn't tell what she was taking, but as soon as I gave the quinine the rash appeared; ever since that I have not given any quinine.

Danger of using soft rubber Catheters.

DR. MUDD.—Twice during the past year I have had my attention called to the unreliability and danger of using these soft rubber catheters. Some of these instruments, or the instruments of some of the manufacturers are very unreliable. Last fall I was called by a very excellent physician to fish out the end of a catheter from the urathra, it had broken off in the urethra. These are soft pliable rubber catheters, and when they are of good manufacture they are very valuable instruments and durable, but some of these instruments are exceedingly unreliable, and soon become very soft and brittle, and this brittleness does not show until they have been introduced and break in the urethra. In the case that I was called to last fall the catheter was broken off in the urethra and the external extremity was back near the bulb. I could locate it very distinctly, and by holding it in position and using a pair of Tieman's œsophageal forceps, pliable coil of block metal, I succeeded in catching the piece of catheter and withdrawing it. The second case that I was called to was one in which the patient was suffering with abscess, so that the canal was narrow of course. In this instance, also, the physician was a cautious as well as a skillful man. He had introduced the instrument after warming it, passed it down beyond the stricture or narrowing and the water had flowed from the bladder through the catherter, and in trying to withdraw it, it broke and he left a part of the catheter in the bladder.

DR. POLLAK.—How did you get that out?

DR. MUDD.—I performed an operation as in lithotomy.

DR. MEISENBACH.—The same thing that Dr. Mudd has spoken about has presented itself to my mind. I have never had a misfortune occur in using a catheter, but I have noticed in using the red rubber catheter in attempting to wash out the bladder, that the catheter when using the stop cock, tears readily, and I found upon inquiry that these red colored goods are brittle. There must be something in the composition which makes them worthless. I don't know from what manufactrey they are, but there seems to be a chemical decomposition which takes place when they become aged. They are not so brittle when new. In using these instruments, it would probably be well always to get a new one and not to use an old one or one which has been laid away for some time.

Saturday, June 23, 1883.

Epithelioma of the Penis.

Dr. Mudd.—Mr. President, I have a specimen here that I do not suppose will be of any marked interest except that its clinical history has some points of interest. It is an epithelioma of the penis and is accompanied by an enlargement of the glands in both groins. The patient, a robust German about thirty-six years of age, is a man of good education, a man who has evidently enjoyed a state of perfect health. He says that for a year or more past he has noticed that occasionally there was some irritation about his penis, as he thought, resulting from the rubbing of his clothing upon the organ, but he noticed nothing wrong about it until about two months ago when he became conscious of a discharge from the meatus. This discharge kept increasing and became more and more annoying to him, and he consulted a physician who told him that it didn't amount to anything. Later he consulted another physician who circumcised him and after the circumcision he found the induration and thickening of the glans penis. At this time the glands of the groin were found to be enlarged. The circumcision occurred five weeks ago. The swelling of the glands did not diminish very much, and at the time I saw the case the gland was larger than an ordinary size hen's egg. It was closely adherent to the deeper tissues—so close that it was immovably fixed seemingly by these adhesions at the inner portion of Poupart's ligament, seemingly attached to the pubes and to the descending ramus of the pubes. The left inguinal gland was also enlarged. Thinking that this gland could be removed, although it seemed so firmly fixed, because I assumed that it was one of the upper chains of glands that was involved, and not those connected with the cribiform fascia of the cribiform opening, I ventured upon its removal. I found that there were deeper adhesions, than I expected, but it did not involve the cribiform fascia. The point of interest in the case is the rapid involvement of glands. The operation upon the penis was made simply with one cut of the knife, the urethral section was continued along the dorsum and the two ears turned out and fastened and the skin on either side near the lower margin and central portions are fastened. In only one case of amputation of the penis have I observed any special trouble on account of nar-

rowing of the meatus, and in this instance, we neglected to make the connection of the meatus sufficiently firm with the skin where it is turned out and inverted over the sides of the lower surface of the corpus spongiosum. There was a little trouble to preserve the channel. I remember one case that Dr. Hodgen operated upon a number of years ago—the first one of the kind I ever saw; in this case there was no trouble except from the obstruction of the meatus from the blood and from the effusion and swelling of the parts; in that case it was simply stitched without the section that he afterwaads made; and the patient's recovery was good. The recoveries in these cases have been good so far as my observation goes, and I have seen a number of cases for the removal of cancerous tumors, and where there was a good operation it was followed with good results, and the return of the growth was long delayed. I have seen in another case, where the inguinal glands were as much enlarged as in this case and yet I failed in removing them because a deeper chain of inguinal glands were involved. I felt at liberty to undertake this operation because I was convinced that it was the upper chain of inguinal glands that was involved.

DR. JOHNSTON.—There can be but one argument in favor of operation in a case of epithelioma of the penis: that is when the organ becomes so offensive from the disease that the patient becomes better without than with it. My friend Dr. Barret and I think Dr. Mudd also, some years ago, saw a very intelligent gentleman who was suffering from epithelioma of the penis. My friend, Dr. Hurt, was called in one day with me and both of us advised him to have the penis excised, and Dr. Hodgen was selected for the operation. I know I went afterwards and tied an artery. There was some disease in the left inguinal gland also. The parts healed up and for the period of a year or perhaps eighteen months, he got along nicely, becoming stout and healthy looking; but he had an irritation of the bladder and complained of difficulty in urinating. At the end of eighteen months or two years, the inguinal glands began to swell and went on rapidly until a tumor had developed larger than my head on the left side, and it continued to enlarge until the system became contaminated and he died. So I think in this case Dr. Mudd will find at the end of eighteen months or two years, that he will have to give a certificate for this patient. I

think he was perfectly justified in performing the operation, however. I think it is the duty of the surgeon to perform the operation and relieve the patient, for the time being at least.

Dr. Lutz.—I hope Dr. Mudd will be more successful than it had been my fortune to be in operations for epithelioma and other malignant growths. I hope there will be no return of the disease. Whether I have been singularly unfortunate or not, I don't know, but in not a single case in which I have removed the mammary gland has the patient remained free from the return of the disease, free from an involvement of the glands of the axilla or the subclavian glands. I have now under my care a patient from whom I removed, in August it will be two years, the right mamma; she is an old maid about forty-eight years of age, and I thought I had carefully removed every possible part of the indurated glands in the axilla, that could be found, laying the axillary space wide open. The wound healed kindly then, but within six months afterwards I found that the glands above the right clavicle were becoming enlarged and indurated, and now the disease has returned and is, perhaps, I dare say four or five times as large as the original tumor which was removed. There is also in this case considerable difficulty in respiration, so much so that I am inclined to the opinion that the glands of the mediastina spaces are involved. I say I have been singularly unfortunate in my experience with these cases; and yet of course, the only true way to treat these cases, is as Dr. Mudd did in this case: remove everything within reach that could possibly be involved, and perhaps the true success of Gross in the treatment of this class of cases, and whose work on the mammary glands is familiar to all surgeons, is due to the fact that he so radically removes everything that could possibly be infiltrated. I believe most surgeons act on the theory that these neoplasms are local in their origin, that is to say: that the primary neoplasm is the first of this disease that subsequently passes through the glands and the general system, if I may so speak, becomes involved; we are sure to have a return of the disease. Now whether this argues entirely in favor of the local origin of these troubles or not, I am not prepared to assert, but it certainly does favor the view that they are local in their origin, and that if the local disease is exterminated as it is manifest that the chances of a return are lessened.

DR. BARRET.—I would like to ask Dr. Lutz if he has ever removed a mammary gland before there was any involvement of the axillary glands?

DR. LUTZ.—Yes, sir, and I have found that subsequently there was an involvement of the glands. I have removed mammary glands when the disease was entirely confined to the gland, and I have found that subsequently the disease would appear in the glands in the axillary space.

DR. MUDD.—In making the report I don't know that I claimed to have cured the patient. I certainly stated very distinctly to him the uncertainty of his condition, and that there would probably be a return of the trouble, especially considering the extensive involvement of the glands. I told him at the time that there might be some other glands involved, that we couldn't say as to that. I believe that this sort of growth is local in its origin. I am firmly convinced of this. Now I do not believe that this patient is going to die in the next year. That he may succumb to the disease I think very probable, but whether it is in five years, does not in my opinion, render the operation less justifiable, for the patient is in better condition to-day and the operation was done early this week; he is in better condition than he was before the operation, and he will live a good deal longer. There is a point in connection with operations on cancerous or malignant growths, and Dr. Lutz speaks of his bad results attending his operations with carcinoma of the breast. It is a safe operation as a rule. I have never had but one patient die from the operation, and in that case the patient was up and about the room, when she took pneumonia and died from it. I have seen a good many breasts removed, and I have only seen one, or at most, two fatal cases as a direct result of the operation. I think when we come to abdominal surgery or deeper seated cancers—those involving organs in the abdominal cavity—where the risks are much greater, we are justified in taking the risk for the temporary relief we may gain. But so far as cancer of the penis is concerned, the relief afforded by the operation more than balances the risk taken. I have now in mind three cases, two of which I know were alive and well a few months ago; in one case the operation was made over three years ago, and the third, which so far as I know is still alive, which was operated on eight years ago. I know that this patient was in good health some two years

ago, but I have not heard from him since. I can recall to mind several other cases in which the patients recovered perfect health after the operation, and so far as I know are still in good condition; I have not heard of any trouble.

Dr. Lutz.—Before Dr. Mudd takes his seat I wish to ask him, as his experience in these cases is much more extensive than mine, in what proportion of cases of cancer of the mammary glands is an involvement of the glands of the chest subsequently to the operation; and then I should like to inquire, as a matter of personal information, what the opinion of the doctor is as to the advisability of the removal of secondary cancer—epithelioma—returning after a removal.

Dr. Mudd.—With regard to the first question I am unable to say; I have not observed the involvement of the glands of the mediastinum, and it seems to me improbable that there will be an involvement of these glands, because there is a direct connection of the lymphatics of the thoracic walls with those of the axillary space, and but an imperfect connection with those of the mediastinum. I have very frequently seen an involvement of the glands of the neck after carcinoma of the breast, but I have not seen the mediastinal glands involved. With regard to the question of the removal of secondary cancer, it seems to me that the same law holds as in primary cancer where the operation can be perfectly formed, that is where we can remove all of the tisues that it is proper to remove, I think the operation is a propea one.

Saturday June 30th., 1883.

Dr. Hendrix.—I have some specimens here, some portions of bones of a leg that I amputated on account of necrosis of the tibia and suppurative inflammation of the knee joint. The subject from which the bones were taken was a girl thirteen years of age. She had cerebro-spinal meningitis in 1881. There is no history of syphilis in the case, so far as I can learn. I questioned the mother about it and she said that her husband had syphilis after the birth of the child, he contracted it after the birth of the child. The child made good recovery from the cerebro-

spinal meningitis and she got along nicely. I was called to see her on account of this trouble on December 26th, 1882, and found her complaining of intense pain in the leg which she located near the knee joint, the leg was flexed and turned outwards. The temperature was then 106°. On the 27th I found no change in the condition. I straightened the limb and applied a plaster of paris splint and elevated the foot. On January 1st, 1883, I noticed that the part was swelling; no fluctuation; on the 10th of January the swelling was progressing, and at this time I detected fluctuation in the joint. Continued the plaster splint together with Dr. Hodgen's splint. On the 1st of February a small opening had occurred just below the knee on the inner side of the crest of the tibia. The temperature was 104°, seldom so low and often above 105°. I enlarged the opening and a large quantity of pus flowed out. The size of the knee, however, was not diminished by the discharge in its vicinity but on the contrary continued to grow larger. On February 10th Dr. Lemen and I aspirated the joint and drew off an ounce and a half of pus, and there seemed to have been a great deal more there. After this the knee seemed to diminish and there was no accumulation until such time as I will mention. On the 28th of February I had her removed to St. Luke's Hospital. I soon found it impracticable to use the splint and I placed the limb on two pads, one above the knee, the other just above the ankle. My reason for doing this was that there was considerable discharge from the leg below the knee. On March 8th I discovered a lateral dislocation of the tibia which was readily reduced. I then placed a sand bag on each side in addition to the one which, (by the way, I forgot to mention in its proper connection) was placed at the heel to keep the limb in place. The knee again became distended, red and very painful. On March 10th Dr. Mudd, who had seen the case a number of times, acquiesced in the propriety of making an exploratory incision in the diseased portion in order to ascertain the existing condition and to amputate if we found it necessary; accordingly on March 12th we made an exploratory incision near the head of the tibia, and the result was that we amputated the limb. Dr. Hurt also saw the case a number of times and administered the chloroform. In amputating we made a lateral incision, making the flap antero-posteriorly. On entering the joint a large quantity of pus escaped. The wound was left open with the exception of a couple of stitches at the angle. It was

dressed with absorbent cotton and just sufficient bandage applied to hold the dressing in place. On the 16th we removed the bandage, which was quite offensive. The stump was elevated above the rest of the body for the first four or five days. The flaps healed partially by first intention and seemed all right, but I noticed a circular spot on the anterior flap corresponding to the end of the bone. On more careful examination the fact was revealed that the bone was pushing through. I made extension by means of sand bags and pulley, but not in time to prevent it perforating the flap. A few days later I observed pus pocketing, in the flap, and made an incision in the posterior flap and inserted a rubber drainage tube in order to secure drainage. There was also asinus formed at the upper portion of the cup, leading from the site of the wound into the large fleshy part of the thigh, I made an incision into it and inserted a drainage tube. This was on the 8th of April; on the 15th of the same month I removed this specimen,—this necrosed bone—it was taken from the end of the stump. The sinuses then soon closed and the recovery went on rapidly, so that before the middle of May the wound had entirely healed and the patient left the hospital. I am still following up the case since she left the hospital. She has developed two abscesses; one just above the ankle and the other at the insersion of the deltoid muscle to the humerus. She complained of pain for sometime previous to her discharge from the hospital, which I attributed to the position in which she had been lying, and thought nothing more about it; it continued until the abscesses formed, and she couldn't sleep very well at night on account of the pain. I put her on iodide of potash about two weeks ago and after taking a few doses she had no more pain, and the abscesses became stationary with a small quantity of pus in each near the surface. Before I gave the iodide it was deep and hard. That is the report of the case; it is imperfect, of course, and here are the specimens.

Dr. Lutz.—The specimens presented by Dr. Hendrix are certainly beautiful illustrations of the effect of osteo myolitis. It seems from the amount of destruction that has occurred in the upper end of the tibia that the central portion of the bone was first attacked and subsequently the outer portion, as is usual, and but for the fact that the Doctor answered the question during the examination of the specimens, I was going to ask why the amputation was made above the joint instead of through the

joint. The Doctor explained that he found the condyles of the femur softened so much that on squeezing the bone there was evidence of the inflammatory action going on in it. It seems to me that the imflammatory condition originally began in the upper portion of the tibia and found its way into the joint and in all likelyhood the pus which afterwards formed, found a channel for its exit, and therefore there was no subsequent reaccumulations at the knee joint after the operation. As to whether or not this inflammation of the bone is syphilitic in its origin, there may be quite a difference of opinion. You know it is held by many syphilographers that syphilis rarely, and by some that it never produces pus. Now whether this opinion is tenable or not I am not prepared to say, but from what I have seen, I am inclined to think that the formation of pus in connection with syphilis is rare. I do not believe that this inflammation of the tibia has any connection with the previous cerebro-spinal meningitis. It seems to me it is coincident and not referable at all to the cerebro-spinal meningitis. Certainly the course pursued in the case was the only rational one, and the Doctor is to be congratulated upon having a very good result.

DR. HENDRIX.—I will say that so far as the cerebro-spinal meningitis is concerned, when she recovered from that she made a very good recovery and there was no evidence of any ill effect, such as poor nutrition or anything of the kind. She seemed to develop well and was as lively as any child. Her sight and hearing were good and there was no difficulty whatever as far as I could discover, and I saw her frequently for two years, the period of time between that when she had the meningitis and the commencement of this trouble. I will further state that there was no history of any injury. Her mother told me, however, which I neglected to mention before, that for a long time previous to the appearance of the trouble, she complained frequently of pain in the knees, and would get her comrades to rub her knees; her mother said she had frequently rubbed them herself with liniments; she said this had been going on for a long time.

DR. LEMEN.—I saw the case that Dr. Hendrix has reported, and I helped him aspirate the joint. I am rather inclined to think from the history of the case and from the symptoms that were developed, that it was simply a case of acute suppurative arthritis, and that the formation of pus in the joint probably per-

forated the capsule. The capsule probably was completely disorganized about the joint and the pus was allowed to escape into the softer tissues. I think that when I saw the case there was an opening on the lower part of tibia, was there not, Doctor?

Dr. Hendrix.—Yes, sir.

Dr. Lemen.—And part of the bone seemed to be dead, was it not?

Dr. Hendrix.—Yes, sir.

Dr. Lemen.—The history of the case, it seems to me, as Dr. Hendrix related it, points to a case of acute suppurative arthritis of the knee joint.

Dr. Williams.—I will say in relation to the statement of Dr. Lutz, that syphilitic affections of the bones rarely cause suppuration, that according to my experience that is not exactly correct. I have seen several cases of abscess in the region of the orbit formed as the result of syphilitic affections of the bones. Some three or four cases that I remember of where periostitis set in involving the substance of the bone, and resulting in large abscesses, which I opened and discharged quite freely, convince me that it is certainly not unfrequent to have suppuration produced as the result of syphilis.

Dr. Hurt.—I saw this case that Dr. Hendrix has reported on two or three occasions and I am prepared to say that I think we both felt inclined towards a conservative system of treatment in this case. I know that was my feeling as far as I had anything to do with it. I saw the case once or twice during the Doctor's abscence, while he was confined to his home by sickness, I believe. But whatever might be said about the propriety of the operation, so far as the indications, they revealed a necessity, there was another fact to be taken into consideration in this case: the patient was becoming septically poisoned and exhausted and hence there was an urgent necessity, I think, for the operation. I do not see how the process of repair could have gone on in such a way as to save this little patient her limb, but then we do not know how much nature can do, and if she had not developed symptoms that indicated to me that she was suffering from pyæmia or septicæmia, I should have given my judgement in favor of further delay. I think we all would have done so.

DR. GREEN.—It struck me while the Doctor was relating the case and especially after the amputation had been performed, that it was rather a case of pyæmia than anything else, and of course the Doctor can congratulate himself that the case has done so well. How can we account for the suppuration in the other limb? It seems to me that this of itself shows a probable connection between this trouble and the cerebro-spinal meningitis. The meningitis probably left something behind it from which this infection developed. And while of course, most cases of pyæmia die, a great many get well. I think this was a case of pyæmia.

DR. LEMEN.—I would like to ask Dr. Green one question: do you mean to say that this was a case of pyæmia from the first or that it was pyæmia resulting from the absorption of pus after the suppuration in the knee joint?

DR. GREEN.—I think it was pyæmia from the very first. In other words, I think that there was a connection between this trouble and the cerebro-spinal meningitis—that the meningitis left the system impregnated with some poison which afterwards, infected the system and this pyæmia was developed.

DR. LEMEN.—If I understand Dr. Hendrix, the patient was perfectly well for a long time after the attack of meningitis, and this probably had no connection with the formation of abscess in the knee joint; we all know these secondary abscesses are liable to form, they very commonly form after suppuration in or about bones.

DR. GREEN.—If you don't call this pyæmia, then there was suppuration after the operation was done, and if the operation was done well and there was suppuration in the arm and the other limb after the operation, how will you account for that if not on the theory that the trouble was a pyæmia?

DR. LEMEN.—That may be, but what is the use of going away back to the cerebro-spinal meningitis for the origin of the trouble, when this long continued suppuration of the bone in the knee joint furnished an explanation of the cause of the pyæmia.

DR GREEN.—In this case I didn't say the cerebro-spinal meningitis was the cause of the trouble, I said it might be connected with the pyæmia. I will explain myself: in order that pyæmia or septicæmia may occur, there must be a predisposition of the system in any person who becomes affected—the system must be

impregnated with those organs which will cause septicæmia or pyæmia, now the meningitis may have left the system in just such a condition that this infection might occur—or it may have left some poison in the system which did not exert itself at the time and which was afterwards developed.

Dr. Lemen.—You mean that the meningitis so weakened the system as to interfere with the constitution so as to cause suppuration?

Dr. Green.—It did not necessarily cause suppuration, but her system was so affected that it could not resist the infection which afterwards got in by some door or other. We know very well that a student may be dissecting and cut himself, and he would recover from the cut and feel no more of it, and another student who cuts himself will be attacked with septicæmia.

Mineral Waters and their Uses. By R. M. Jordan, M. D.

Mineral waters have been credited with healing properties in all ages, and have been extensively used for the cure of disease ever since the days of Esculapius. The Greeks and Romans employed them extensively both as drinks and baths, and attributed to them very wonderful virtues. Even at that early period, so wonderful and marvelous were the cures wrought that the Greek and Roman priest took advantage of them to illustrate the miraculous powers they claimed to possess. With formal ceremonies they blessed the waters and invoked the patronage of especial deities, from whom the sufferers should solicit aid before they could derive benefit from their use.

The Greeks, anterior to the Christian era, considered their hot springs as presents from a divinity, and dedicated them to Hercules. Hypocrates mentions various minerals which he supposed to exist in the hot springs and therefore forbade their use for ordinary purposes. The saline waters were among the first to attract attention and to become celebrated for their curative powers. Aristotle and Strabo attempted explanations of their nature and the latter writer declared them possessed of the power of dissolving urinary calculi. The ancients were familiar, with the physical properties of many springs, which they classified according to their most striking characteristics; thus Pliny speaks of the acidulated waters of Macedonia, and Horace of the still more celebrated waters of Baiæ, as sulphurous. Saline and

ferruginous waters were also spoken of. During the period of Pagan civilization, mineral waters attained a widespread celebrity, which was destined to suffer eclipse in the earlier days of Christian civilization. Because the cures which had been effected by their use had been referred by the Pagan priests to the influence of their divinities, it was held by the priests of the Christian church, when Rome became Christianized, to be to some extent an acknowledgement of the power of Pagan gods to credit them with healing properties.

The abhorence in which they are now held, occasioned their almost entire abandonment for many centuries, and it was not until the ninth century (in the reign of the Emperor Charlemagne) that they again began to attract any considerable attention. The waters of Aix-la-Chapelle caught the attention and so pleased the fancies of that great ruler, that he caused a bath to be built for himself and family at that place. So illustrious a person did not lack followers, and once more mineral waters came into general favor, but upon the death of Charlemagne, which again plunged the south of Europe in barbarism, they passed out of notice until about the close of the 15th century when their utility was once more generally recognized in Italy, then the center of scientific culture. In 1492 Savonarola published his book on the hot mineral waters of Italy. A century later another Italian physician, Baccius, published a work on the hot springs of France. In the 16th and 17th centuries several works on several English mineral waters were published in England. In Germany and in France very excellent accounts of the medicated waters of their respective countries were given by Duclos and others. In 1680, Urban Hjerne gave an analysis of the waters of Sweden.

In 1711, Allen's works on the "Natural History of the Mineral Waters of Great Britian" appeared. Since then our knowledge of mineral waters and their uses has steadily advanced, especially abroad. With the advancemement of chemistry, analysis has become more perfect, our knowledge of the physical properties of the mineral spring has more accurate, and slowly we have attained to the knowledge of the agents upon which their medical virtues depend. Superstition and blind empiricism no longer direct their use. No longer need the sick resort to *springs* as a general rule for relief, but those who are wise enough to consult the scientific physician are enabled to determine with no little accuracy what

particular spring meets the needs of his *particular* case. Scientific interest, the love of gain, the thirst for pleasure, the desire to relieve suffering now all unite to determine with precision the exact requirements of particular cases, and to render grateful and pleasant to invalids the pursuit of the priceless jewell—health. Wisdom and mirth join hands as they lead the way to fountains in which the leper is cleaned of his stains; and men and women are learning that the breath of laughter is antidotal to the poison of disease. Tall trees over-arching green grass plots and moving to the sound of musical-laden air, add to the physical influence of the waters, the spiritual influence of peaceful and innocent enjoyment; and so fruitful has this union of happiness with the more material resources of medicine proved, that now the springs are among the best recognized and most powerful agents of medicinal science, abroad if not in this country.

With this short and rather imperfect history of mineral waters, it may be asked, what is a mineral water, according to the medical acceptance of the term? "A mineral water, in the medical acceptance of the term, is one which by virtue of its ingredients, whether mineral or organic, gaseous or the principle of heat, is especially applicable to the treatment of disease."—Dr. Geo. E. Walton, of Cincinnati, Ohio, author of a most valuable book on the mineral springs of the United States and Canada.

I now for a brief space of time ask your attention to the important consideration as to

HOW MINERAL WATERS CAN BE BETTER UTILIZED IN THE TREATMENT OF DISEASE.

It is unnecessary at this day to attempt an argument in defense of mineral waters as curative agents in the treatment of disease; whatever may have been appropriate ten or twenty years ago, it is well known to you all that they are recognized agents of the materia medica—so recognized by the most eminent physicians in this country and abroad—and, doubtless many or all of you are in the habit of employing them in those cases to which you deem them adapted.

I will therefore limit myself to some remarks concerning the best method of utilizing these agents. You are witnesses to the rapidity with which mineral waters have come into use within a few years past, so that the shops of the apothecary present you with waters from distant Hungary, from the borders of the

Rhine, from south of France, from the summits of the mountain ranges in Maine and Vermont, from the plains of Saratoga, from the springs district of Viaginia and so through a list that might be extended almost indefinitely; not only is this so, but in addition to these genuine mineral waters, we have a large nnmber of artificial or spurious mineral waters intended by the manufacturers to be sold for the genuine article.

I need hardly remind you that the use of these artificial mineral waters by the physician jeopardise conclusions that may be made concerning the therapeutic value of the mineral water so counterfeited. Unfortunately some persons think the imitations are as good as the original. They do not call to mind the fact that chemistry is not an exact science, especially as regards the analysis of mineral waters, and that even if it were, the capacity of manufacturers of artificial waters would render their products unreliable, so that they would be discarded. Then immitation mineral waters should be classed with adulterations of medicine or food, and not only that, but it appears to me that the government should directly interfere, with those sold, by law; that is, it should always be indicated that they are imitations, on the labels of the bottles, and not the genuine; just as it is required that oleomarjarine be sold for what it is and not for genuine butter. In addition to this the proprietors of genuine waters of good repute should adopt for their different waters a style of package that would readily become known, and counterfeiting of the package should be severely punished. Physicians should then prescribe only the genuine water. I should like also to indicate another obstruction in the utilization of mineral waters in this country. It is the absolute freedom that prevails at all spring resorts as to taking the water. Any one, whether the waters are adapted to his disease or not, may repair to the springs and drink of the water. Often the water is taken immoderately so that a person already sick, is made much worse; and the well are made sick. I need not remind you that these things are much better regulated abroad, that they have long ago learned that mineral waters are active medical agents, potent for good when properly used, and pregnant with evil when improperly applied. According the springs are provided with government mineral inspectors who regulate the drinking of the water, make rules as to their employment and when the waters are very active, persons

are not permitted to drink them except at the prescription of an authorized physician.

Now, I should not like to transfer directly to this country the ways of the old world; however, it appears to me that something similar, but specially conforming to our few institutions might be well applied at our prominent spring resorts. Would it not be well that the National Board of Health be authorized to appoint medical superintendants over these places, whose duty it should be to reside there during the summer from the 15th of June to the 15th of October; study thoroughly the therapeutic value and action of the water, the climatology of the location, and give free advice to those who desire it as to the adaptability of the water to their diseases, the method of using it, the quantity and time of taking it when used only as a beverage, and rules for bathing at bath resorts. I believe that an investigation on your part, into the many errors committed by persons who drink these mineral waters without the proper knowledge of their effects, would convince you of the propriety of some such regulation.

Before concluding my remarks on this important subject, I can but express my surprise as well as my deep regrets, that the medical profession of this country has given so little of its time to the consideration of these valuable medicinal agents. Whereas abroad, many of the most distinguished physicians have given much of their very valuable time, not only to writing of their therapeutic use, but daily teach in the clinics their great value in the treatment of many chronic diseases. I am very sure if the profession in this country is aroused from it sapathy and its attention turned to the importance of investigating and thoroughly understanding these waters, it will not leave anything undone until they are correctly understood and properly applied in the treatment of the many chronic diseases to which they are admirably adapted. For ten years I was owner of and resident physician at one of these valuable medical springs (Jordan's White Sulphur Springs, Va.) During that time as well as a frequent visitor since then at various other springs, extensive and close observation has convinced me, *beyond a doubt*, that they are as valuable in the treatment of many chronic diseases as any of the medicine we find in the apothecary shop. Chemical analysis show them to contain the same ingredients as we prescribe daily and from the fact that they do cure diseases which cannot be cured by such medicine as we use from drug stores, it must be

inferred that they contain valuable constituents not as yet made known by chemical analysis. Therefore experience is the only sure guide for their proper use. "I dare pledge my word that, if they be only *fully* and *fairly* tried, they will be found among the most powerful agents which have ever been brought to the relief of human maladies."—Dr. Armstrong.

I most cordially adopt the sentiments of the distinguished Dr. Armstrong.

DISCUSSION.

DR. SCOTT.—I am very sorry that the Doctor's paper was read so late this evening and so late in the season; I believe this is our evening for final adjournment for the season, because if there is anything about which the general practitioner lacks information, I think it is the right understanding of the therapeutic value of the various mineral springs that we have in this country. One or two of these springs are well known, but we know very little of the vast number that are scattered throughout the country. I myself confess that I know but little if anything of the value of these waters, and I am glad that Dr. Jordan brought the subject before the society. It is a very important subject. If one of my patients consulted me in regard to the various springs, I couldn't tell, him anything of their therapeutic value. I know that the Hot Springs, of Arkansas are reputed to cure syphilis and rheumatism. I do not believe that our patients get any better at Hot Springs by drinking and bathing in the water than they do here, except in this, so far as my observation is concerned, that the use of this particular water enables the patient to take more of the remedies, such as iodide of potash, than they can here in St. Louis. I know that patients treated for syphilis can take twice and sometimes triple the dose of these remedies at Hot Sprimgs that they can take here, and I think the benefits derived at Hot Springs comes through this channel. I confess that I know very little about this subject and I hope it will be pursued further when we reassemble in the fall.

DR. KINGSLEY.—I wish to say a word or two in regard to mineral waters and water in general. The Doctor's paper was quite interesting and, especially, inasmuch as the subjectis attracting a great deal of attention. It has been a comparatively short time since Fothing said the water treatment would be the treatment of the future. A great deal of attention has lately been

given to this matter. If you take water, no matter what it is, and give it to some patients, they will be benefited; and many of those who go to the springs, if they took the water at home, would be decidedly benefited. It is a recognized fact that water produces rapid tissue metamorphosis. Then there are other things to be taken into consideration. When persons go away to the springs, their improvement is always much greater than if they remain at home and drink the same water. There is a change of surroundings, a different atmosphere and diet, there is an abandonment of business and attention given to health, and these things are very important; but it is also a fact, doubtless, that the use of water itself is beneficial, its application externally, and the partaking of it internally. In many cases where there is an irritable condition of the bladder, in cases of cystitis, the taking of large quantities of water dilutes the salts of urine and relieves the irritation. It relieves constipation, no matter of what kind, if it is water containing salts, such as bitter water, hunyadi, etc. And it is beneficial in a great many ways.

Dr. Love.—This subject is an interesting one, and I regret that Dr. Jordan did not give us something in the way of directions as to the uses of the different mineral waters, but he has opened up the subject and I hope he will, at another time, furnish a supplement to his paper, and will give us some practical suggestions with reference to where it is best to send our patients. I think that if our patients are to use mineral waters, they should be used properly and under proper direction; they should not be allowed to follow their own sweet will. The question as to the best spring for a given disease is, of course, an important one. I think that in a great many instances the cures which are reported to occur at Hot Springs, take place on account of the large quantities of hot water which is drunk. The simple taking of hot water enables the patient to eliminate larger quantities of medicine and thus the disease is more rapidly cured. I know that in my private practice I can give a much larger quantity of medicine by simple directing the patient to drink hot water; then again large quantities of hot water, as has just been remarked, has certainly a very beneficial effect upon irritable conditions of the bladder. I think this subject certainly deserves more attention than has heretofore been paid to it, and I hope Dr. Jordan will, at some future time, give us the further benefit of his observations.

ARTICLE XL.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Reported for the JOURNAL.

THURSDAY EVENING, June 7th, 1883.

Case of Extreme Mitral Stenosis, Death Resulting in a few Months from Sequential Lesions without General Dropsy. By J. T. Eskridge, M. D., Physician to Jefferson Medical College and St. Mary's Hospitals.

Charlie, æt. fifteen years died, in St. Mary's Hospital during the latter part of December, 1882. In February of that year, during my term of service, he first came to the hospital, suffering from acute bronchitis. The attack ran its course in a week or two, but the heart, during and after the seizure was exceedingly irritable, frequently beating from 120 to 150 per minute. Infrequently he complained of pain over the præcordial region. The heart was repeatedly and carefully examined, but no endocardial murmur or pericardial friction sound was heard. No thrill or friction fremitus was felt. He was kept in the recumbent posture, and counter irritants were applied to the præcardium. At the end of about two weeks he left the hospital feeling tolerable well, although the cardiac pulsations were rarely below 100 per minute, and a little exercise or excitement of any kind would increase them to 120 or more.

In August, 1882 he re-entered the hospital and was again suffering from acute bronchitis, with free secretion attended by numerous subcrepitant and large moist bronchial râles. After the subsidence of that attack, which took place in about a week, a decidedly rough and rather long pre-systolic murmur was heard. During the remainder of his life he stayed in the hospital and was engaged most of the time in waiting upon the sick in the ward. Ascending and descending stairs and active exercise of any kind greatly exhausted him, causing the heart to beat tumultuously, and him to pant for breath. He rapidly grew worse, and by the latter part of November he was spitting quantities of blood rather frequently. The lungs soon became so engorged that the frequent hæmoptysis did not relieve them.

During most of December he remained in bed propped up by pillows. The last two weeks of his life he was air-hungry, and gasped for breath. His extremities were cool and cyanosed, his face was of a dusky hue, and he expectorated large quantities of blood and frothy mucus. No general dropsy existed. Considerable albumen was found in the urine. Physical signs of pulmonary congestion and œdema, bronchitis, pleurisy with effusion, pleuro-pericarditis, and pericarditis with effusion in the pericardium were present during the last few weeks of his life.

Sectio Cadaveris.—Numerous recent and old pleuritic adhesions were found, especially in the neighborhood of the heart. Pleuræ were slightly adherent to the upper portion of the pericardium by means of recent exudates. Considerable fluid, containing only a trace of lymph and no pus, was seen in the pleural sacs. The pericardium contained several ounces of nearly clear serum. Several patches of recently exuded lymph were present on the outer surfaces of the ventricles. The weight and size of the heart were greatly increased. The right cavities of the heart were relaxed and filled with dark fluid blood and a chicken fat clot. The left side of the heart was less relaxed and contained a smaller quantity of blood. The wall of the right ventricle was nearly twice its usual thickness; its cavity slightly enlarged. The right auricle dilated. The valvular curtains at the pulmonary orifice appeared competent and showed no inflammatory deposits. Tricuspid valve slightly incompetent, otherwise normal. The left auricle with its apendix was enormously dilated. The left ventricle was concentrically hypertrophied. The aortic valve curtains were somewhat thickened, but they are competent and do not encroach upon the orifice. The mitral curtains are adherent to each other along their entire right borders, and along the external portion of their left free margins, thus leaving a space only four millimetres long by two wide, for the blood to pass through. The valve has a leathery feel, but neither it nor the surface of the auricle is rough. The mitral valve does not present the funnel-shaped appearance usually seen in such cases, because, probably, the curtains had adhered to each other irregularly and left a small opening to one side of the center of the normal orifice. The lungs were dark, deeply congested, and more or less œdematous. Several ounces of clear serum were found in the peritoneal cavity. Liver, spleen and kidneys dark and congested.

One point in the clinical history of this case is worthy of

special attention. The first symptoms directing attention to cardiac disease, were the rapid pulse and exceedingly irritable condition of the heart. These symptoms existed for several weeks and probably for a few months, before a murmur was audible. An explanation of these, without the presence of a murmur, will be found by a careful study of the diseased mitral valve before us. Neither the valve nor the surface of the auricle is roughened; consequently, for the production of a pre-systolic murmur under such conditions, it is necessary for the blood current to meet with sufficient resistance in its passage from the auricle into the ventricle to enable it to set up decided vibration in the valve itself. Before sufficient mechanical obstruction took place at this orifice, the parts being comparatively smooth, to develop a murmur, inflammation and beginning adhesions of the curtains to each other were taking place. The latter conditions, although not sufficient to give rise to a murmur, rendered the heart irritable. If the explanation given is the correct one, it points to the significance of some irritable hearts, where no murmur is present to announce cardiac valvular disease.

The length of the murmur was greater than that of any mitral pre-systolic murmur that I had heard before. It seemed to me to be divided into two parts, both occurring between the diastole and systole of the heart. The first part was the softer and had less intensity; the latter was very rough and ended abruptly. They corresponded to what Hayden has described as the post-diastolic and pre-systolic murmur. He says they always denote great obstruction at the auriculo-ventricular orifice. The post-diastolic murmur, he thinks, is due to the passive flow of blood from the auricle into the ventricle; the pre-systolic taking place when the auricle contracts. If subsequent autopsies should almost constantly associate the prolonged or double pre-systolic murmur with great stenosis at the mitral orifice, it will be of value in prognosis, as life cannot long continue, when stenosis is as great as seen in the heart I exhibited to-night.

Dr. F. P. Henry exhibited a specimen of intra-thoracic aneurism, markedly sacculated, and involving the arch and descending portion of the aorta as far downward as the lower border of sixth rib. The following notes were taken by Dr. Howard-Kelley, the resident physician, soon after the patient's admission to the Episcopal Hospital:

Dec. 7, 1882.—"There is a distinctly elevated area about two

inches in diameter to left of manubrium, occupying the first and second intercostal spaces and projecting the cartilage of the second rib. This is also the seat of the greatest dullness and of strong bruit and expansile movement. Murmurs heard at apex, ensiform cartilage, and second right aortal cartilage. * * * Aortic sounds weak and muffled. Pulse in right radial and axillary, strong. In left radial and axillary, weak and distinctly delayed. Bronchials at elbow visible, sinuous and atheromatous. Faint bruit in left axillary; none in right. Strong bruit in left carotid; faint in right. Some relation between subclavian arteries. Faint bruit in abdominal aorta. Left pupil always smaller then right."

Under the use of large doses of potassium iodide there was a decided subsidence of the external tumor; also of the pulsation and bruit. The most troublesome symptom, dyspnœa, was not however, materially benefitted.

Death occurred on May 13th, through rupture into the right bronchus, and was immediate.

The removal of the aneurism was rendered difficult by the adhesions to neighboring tissues, especially to the sternum and ribs in front. The fifth and sixth dorsal vertebræ were deeply eroded and at the site of these erosions, the aneurismal wall was entirely gone, its place being supplied by two masses of fibrin accurately fitting into the erosions but unconnected organically with the sac. They merely acted as plugs. The heart was in an advanced state of fatty degeneration and slightly enlarged. The aortic valves were perfectly healthy but immediately above them were marked atheromatous changes. The opening into the right bronchus was about the size of a three cent piece.

Dr. Henry also presented specimens from a case of acute phosphorus poisoning, consisting of stomach, liver, kidneys, heart and spleen. The phosphorus was taken with suicidal intent during the night of May 7th, and was obtained by soaking the heads of a box of matches in water. Fifteen minutes after swallowing the solution, the patient, a male German æt. 22, experienced a burning sensation in the stomach which, in the course of a few hours, (about six) steadily increased until the pain became excruciating. Copius and repeated attacks of vomiting then ensued and followed every attempt to allay thirst, which was excessive. On the 8th there was a very loose discharge from the bowels. The patient was admitted to the hospital on the

10th. His skin was sallow and dark but not icteric in hue. There was tenderness over the liver and the line of liver dullness was slightly increased. Severe pain in the abdomen was complained of and this pain had continued with occasional intermissions since the 8th. The pulse was full and strong, 84 per minute. The temperature was 100°. The urine contained considerable albumen, but no casts nor other abnormal ingredients. I extract the following from notes taken by the resident physician, Dr. James S. Carpenter:

May 11th. No pain; pulse 100; temperature 98.6°; patient refuses food but craves acid drinks.

May 12th. Vomited once, but phosphorus was not tasted by the patient as heretofore. Pulse 108 and weaker; temperature, which was 101° on the evening of the 11th, now 98.6°; decided icterus; thirst continues.

May 13th. Jaundice increased; tongue dry and brown round edges; abdominal wall covered with numerous petechial spots Pulse 126; temperature 100°.

May 14th. Intense jaundice; one clay-colored stool; pulse very weak, 32; temperature 98.5°; extremities cold; bladder relieved by catheter; 48 oz. removed. The urine contained bile pigment in large amount and had a strong odor of phosphorus. The man died at 10.40 A. M., one week less fourteen hours after taking the poison. As the patient was not admitted until the third day after he had swallowed the phosphorus, the treatment was directed towards relieving pain and retaining the strength as far was as possible.

On autopsy, which was made very soon after death, the stomach was found filled with a grumous, bloody fluid, but the gastric mucous membrane was quite pale and free from erosion or any sign of inflammation. The folds of mucous membrane upon its surface were, however, unusually prominent. The liver weighed 3 pounds 14 ounces. The anterior border of right lobe and the parts adjacent to the gall bladder were yellow and mottled. Streaks of this yellow coloration extended along the borders of the fissures on the under surface; in parts these streaks were an inch in width. The bulk of the liver was normal in appearance; gall bladder was empty. Heart ridgid in systole; its valves healthy; slight pericardial effusions.

Lungs.—Some old pleuritic adhesions and emphysematous vesicles at both apices.

Spleen and kidneys apparently healthy. Blood fluid. A microscopic examination of the liver will be made and reported upon at a future meeting.

Carcinoma Scirrhus of the Breast. By Dr J. H. Musser for Dr. R. M. Girvin.

In Nov., 1882, Miss ——, a lady of good circumstances, with a hereditary tendency to carcinoma, and scrofula from the mother, noticed at the upper portion of the breast, a small, extremely tender lump the size of a hickory nut. The nodule increased in size and on the day of removal, Sept. 17th, 1883, was as large as a duck's egg, in the first position mentioned. Neither at that time nor at any other time was the nipple either diseased or retracted, or the mamma discolored. The breast had never been injured. The lymphatics were not involved. The general health and nutrition was good.

The operation was performed on the above date by Dr. Girvin, on account of severe paroxysmal pain. So severe was this symptom that a slight opium habit developed. The wound healed nicely. There has been no return of the disease (May 20th.)

Examination of a section of the hard mass in the gland demonstrated it to be a cirrhus.

Carcinoma (Scirrhus) of the Rectum. By Dr J. H. Musser.

At the autopsy of the person from whom these specimens were removed—made thirty six hours after death—by Dr. W. E. Hughes, we found rigor mortis well marked, the body greatly emaciated, the skin of a yellow earth color and on the right buttock near the gluteal fold the ragged grayish openings of several sinuses, which we subsequently proved, communicated with a sac behind the rectum. This sac opened into the rectum which at that point was greatly dilated. At the bottom of the dilated pouch in the posterior wall towards the anus and two and a half inches therefrom, was a hard mass. This mass was the size of a silver dollar, involved two thirds of the wall, but did not cause occlusion of the gut. The surface was ulcerated. The bowel, towards the cæcum was dilated, the mucous membrane congested and the muscular coat hypertrophied. The remainder of the intestine was normal and the glands of the mesentary were only slightly enlarged. The liver weighed four and a half pounds, was very fatty and in the left lobe, a secondary mass larger than a walnut, was found. The apex of

the left lung was the seat of a small area of catarrhal pheumonia; the base was bound down by rather recent adhesions. Further than this, the tisues presented no other change than that due to wasting disease. Microscopical examination revealed the two nodules to be of the nature of a hard cancer.

The patient, a female 37 years old, had always been a dyspeptic and of a constipated habit. Her mother and one sister had died of cancer of the stomach; her maternal uncle, of the same disease of the liver. I attended Mrs. —— from Oct. 11th, '81 to Feb. 7th, '82. She died in May of the latter year. From the 5th of August previous to my first visit she had been suffering from so-called dysentary, twenty to thirty bloody and mucous stools with tormina and tenesmus. She had grown very feeble and lost much flesh. My notes state abdomen flat, tender all over, especially in the fossæ, but no tumor noticeable. Dysenteric diarrhœa continued and I may say these discharges kept up during my attendance, at times better, again worse. The mucus was always present; the blood, at times none, again slight or again in large amounts. The appetite was poor and her dyspepsia bad. The debility and emaciation progressed and the appetite became less. In November I detected a hard tumor with apparently a raw surface, two inches and a half from the anus.

During December and January she complained of pains in legs and of severe cramps at night. In January she began to complain of pain in the right hip posteriorly. Local and internal remedies scarcely relieved it, and finally the post-rectal abscess discharged. Death from exhaustion ended the career of horrible suffering. I would remark that in all probability the obstinate constipation predisposed to the location of the disease. The constant irritation of the hardened fæces would tend to the deposition of the cancerous growth in this locality, in a person predisposed to that disease. I have not seen constipation noted as a factor in the ætiology of rectal carcinoma, but I think such a view plausible and that we may infer the practical point—"soluble bowels" in the cancerous inclined.

Sarcoma of the Bladder. By J. H. Musser M. D.

I am indebted to my freind Dr. Sant R. Skillern, for whom I made the antopsy, for the privilege of exhibiting this very interesting specimen. At the time of the examination the skin of the body was of the characteristic cachectic hue, the vigor

mortis was marked, the emaciation considerable though not striking, for on section there was a fair amount of fat in the abdominal walls and in the omentum, while the muscles were comparatively large. The abdominal cavity alone was examined. The peritoneum was healthy, the stomach and intestines of a normal appearance. Neither the mesenteric nor any other lymphatic glands were affected. The liver was slightly enlarged and fatty; the spleen normal. The genito-urinary tract was removed intact, the kidneys being severed from their attachments with difficulty on account of being surrounded by fat. Begining with the kidneys the left was about half the natural size with thickened adherent capsule. The pelvis was very greatly dilated, the secreting portion reduced to one third the natural size. The medullary portion was mostly atrophied, the cortical, was thin hard and pale. The right kidney was larger by one third than normal, was also cirrhotic and although its pelvis was dilated the secreting portion was not atrophied very much. The ureters were very much dilated, averaging the size of the index finger. The bladder was in its normal position and on opening, the calibre was found lessened by one half, the walls much hypertrophied. At the base of the bladder in the trigone vesicale a flat tumor was detected. It measured two inches transversely and one antero-posteriorly. The base of the tumor was smaller than the upper surface. This surface was irregular, at some places ulcerated, at others covered with phosphatic concretions. The orifices of the ureters were found by hydrostatic means to open into the tumor and hence were somewhat occluded. The urethral canal was not encroached upon. To the left of the large tumor were two small secondary masses.

MICROSCOPICAL EXAMINATION OF THE KIDNEYS AND THE TUMOR.

In the former interstitial and tubular nephritis was found. The tumor was of the histological appearance of a sarcoma. The sections are under the microscope for examination.

The person from whom these specimens were removed had been a successful minister in charge of a large congregation. He had always been a great mental worker. At the time of his death he was fifty years old. During his life his habits were most exemplary. His previous health was good; in his family history no evidence of hereditary disease could be traced. Fo

the clinical history I am indebted to the various medical gentlemen that attended him.

Prof. Agnew was consulted more than two years prior to death on account of vesical irritation. Six months thereafter he passed blood by the urethra. Careful examination at this time and before, both by the urethra and rectum, failed to detect any tumor or calculus. In a short time the cachectic hue became evident, and withal, the professor suspected malignant disease. The hæmorrhages became more profuse and occurred more frequently. Prof. Tyson was then consulted. He very kindly allows me to extract the following from his notes.

Dr. Tyson said that Mr: S. first came under his observation May 27th. 1880, being then 47 years old. He stated that he had been annoyed by frequent micturition for about five years, which gradually increased, until at that time he had to rise two or three times each night, but though it was more frequent during the day than at night. At first he was completely relieved of this symptom, during his vacation which he spent in the woods, and was still much better at such times. He thought Poland waters gave him relief and he felt compelled to use it constantly. There was at this time a burning sensation at the neck of the bladder. The urine at this date contained $\frac{1}{12}$ its bulk of albumen, enough blood corpuscles to give it a "smoke hue", but no casts. On June 22nd, he again reported, Prof. Agnew, in the meantime, having passed a sound, and detected a slight stricture which he thought accounted for the symptoms. The patient was instructed to pass a sound for himself and he thought it gave him great relief, not only diminishing greatly the desire to pass water, but also relieving the sensation at the neck of the bladder.

Dr. Tyson did not see him again until Oct. 31, 1881. when he reported that during the previous year he had been using the Bougie at one time as often as five or six times a week but more frequently every three or four days. He had been very well during this time, gaining ten pounds in his summer vacation, and at that time not urinating more frequently than any one else although he kept up the use of Poland waters, of which he was using eight tumblers a day for five weeks while at the spring and when at home five a day. He now mentioned that during the summer, he felt an occasional soreness in the region of the the bladder when stooping, and noticed also occasional chalky deposits in his urine. At the time of this visit his urine was acid.

sp. gr. 1014, and contained one fifth its bulk of albumen, but no tube casts. No note of blood was then made.

On Nov. 7th. his urine contained a sediment equal to about one tenth to one twelfth its bulk which was composed mainly of blood corpuscles. There were a few leucocytes. He continued to visit Dr Tyson until March 28, 1882. During much of this time, he reported himself improved, there being much less frequent micturition at times, while the uncomfortable sensation at the neck of the bladder was less. The Poland water was discontinued and ordinary drinking water substituted with about the same effect in relieving the symptoms. During most of this time he took oil of eucalyptus in doses of from six to ten drops times a day, we thought at the time with good effect. But the three same changes occurred when he was taking nothing. His urine was always albuminous, sometime containing blood appreto the naked eye. Once or twice he passed a small clot of blood ciable from the bladder, and on Jan. 7, 1882 a larger clot which he compared to a small leech. Two or three times he brought chalky concretions evidently phosphates, which he had passed. He always thought the bougie relieved him. He was always worse after a hard days work as on a Monday after preaching a couple of times Sunday. Benzoic acid and ergot were used with about the sameeffect. The oil of eucalyptus gave him apparently temporary but no permanent relief.

On March 28th, he reported for the last time and said that since his previous visit, seven weeks before, he had been very ill, with what seemed to be an attack of great prostration in which the urine was little altered except that there was increased phosphatic sediment. More recently however there seemed to be always, except for short intervals, more or less blood in the urine. At no time during his ilness, did he present a cachectic appearance, nor any other symptoms except those mentioned of intermittent hæmorrhage from the bladder and symptoms of vesical irritation and had not suspected malignant disease of the bladder while he was under his observation but thought rather there might be a hæmorrhoidal condition of the prostatic plexus of vessels.

During the summer and fall of 1882, the general health of S. failed very much, while the vesical irritation was quite pronounced. When under Prof. Agnew's care, he began to use a sound and at this time used it daily for its soothing effect. Along with

the slight vesical tenesmus, he suffered a little from pain at the head of the penis, from the very first. During this time, and in the winter, the hæmorrhages continued. The blood was discharged before the urine; sometime a considerable amount of pure blood, fluid or in clots. The bloody discharges occurred with every urination, or days would pass by with clear discharges.

Dr. Skillern attended S. from Jan. 9th. 1883. until his death on March, 13th. From his notes in addition to the above glean the following factes. The occasion of the first visit to the patient was due to a fit which he had, and the nature of which was not clear, although it was probably a syncopal attack from loss of blood. He suddenly became unconscious and when seen had a pallid face, cold, clammy extremities, a feeble pulse and shallow respirations. There had been no convulsion although slight convulsive movements were noticeable. Hypodermic injections of amyl nitrite, soon aroused him although he dozed for an hour afterwards. There is no evidence to prove that the seizure was uremic. At the time his general condition was very bad. During January it is noted that he used the catheter frequently on occount of a slight difficulty in starting the flow of urine and that in using it a grating sensation was felt by him, that the paroxysmal hæmorrhages continued; that the constant feeling of discomfort at the neck of the bladder, and the dysuria grew worse. Micturition occurred every two hours. In addition to the above, in February, he had morning nauseaand vomiting, generally losing his early meal, becoming more frequent later in the month. The loss of flesh and strength became very evident, as did the cachectic appearance. Two weeks pior to death he began to complain of renal pain; the twenty four hours prior the pain was agonizing. He died of exhaustion. It may be noted that the urine was never suppressed nor was there even marked vesical pain. Dr. Formad expressed the opinion, from an examination of the urine, several weeks before death that malignant disease of the bladder was present, confirming the opinion of the other gentlemen. His opinion was based on the character of the epithelium in the deposit, being of the appearance of the deep layers of the mucous membrane of the bladder.

Dr. Agnew kindly informs me, without referring to his notes, that he distinely recalls four cases of sarcoma of the bladder, all in males and in all bloody urine was an early and constantly

recurring symptom amounting in one of the cases to very profuse hæmorrhages. Pain in one or both hips was also an early symptom. The patients were all over fourty years of age. This interesting note calls attention to the chief facts of these cases and an especially noteworthy one, the age of the patient. As is well known, sarcoma in other situations generally occurs in early life, in this in later life. Then in examination of the section of the mouth of the urethra to the flat tumor will show how readily a sound could have passed over the tumor; while the base of the bladder being filled the sound could not engage the mass. The enlarged prostate was no doubt deceptive, obscuring the basil mass, when rectal touch was made.

Notes on Medical Literature.

Article XLI.

Notes on the Pathology of Uterine Fibro cysts. By R. W. Wilcox, M. D,.

The pathology of uterine fibro-cysts, partly because of their rarity, partly because they have been often mistaken for ovarian cysts, remained for many years without study. Then owing to the haste of an operation, complicated by extensive adhesions, the relations of the tumor to other organs not being made out, doubtless many have been reported as ovarian cysts. About fifteen years ago attention began to be called to these tumors, in France, Koeberlé (Gazett *Hebdom*, No. 11, 1869) reporting fourteen, while in America Dr. C. C. Lee collected nineteen cases (Remarks upon Diagnosis of ovarian from Fibro-cystic Tumors, N. Y., 1869).

But although the frequency of these tumors was underestimated, their existence has been known and commented upon since the days of Astruc. Theories as to the origin of these, often enormous, cystic tumors, theories, conjectural or otherwise, have been numerous but until the careful studies of Leopold (*Arch. f. Gyn. Bd.* VI, 1874 and VII, 1875.) were made, the pathology was based more especially on the gèodes of Cruveilhier (*Traité D' Avat Path.* see also *Anat. Path. Liv.* XIII, p. 4). assuming these theories as the results of œdema and degenerative changes.

To increase the difficulties, the definition of a cyst was by no means precise. Also sarcomatous tissues would often be classed as fibromatous, thus giving a totally different view of the pathology. The following case, a few years earlier, would have passed for a fibro-cyst. That was a sarcoma of the uterus in which an area of hæmorrhage had given rise to a pseudo-cyst, a tumor totally different as to prognosis, (*Ferrier, Revue d' Chirurg, Mai*, 1881, *also D' Union Med.* 1881, p. 1022).

The theory of lymphatic dilatation had been advanced sometime before the publication of Peau et Urdy's Hysterotomie in 1873, where it is criticised. But the first real work was done by

Editorial Notes.

Dr. W. H. Byford. Prof. Gynæcology, Rush Medical College, President and Prof. Obstetrics Woman's Hospital Medical College, Chicago, Ill., says: "We have tried the Iodia prepared by Battle & Co. It is a useful preparation, and fulfils our expectations."

We can say from our own experience that Bromidia prepared by Battle & Co. is as good if not better than any other Hypnotic that we ever used. It has proven entirely satisfactory in our hands. Correspond with them and mention this Journal. See advt.

Labor on the Sandwich Islands.—The midwives are generally old men. When labor begins the woman is seated upon the the knees of the midwife, her back facing him. He forcibly compresses her abdomen until the child is born, which falls upon the floor between his feet. The patient then stands while the midwife pulls her tongue until she eructate or vomit, which expels the placenta.

Some time since we received a pound package of Beef Reptonoids from Reed & Carnrick. and have tried it in cases convalescing from Fevers etc. and have found it most valuable Reed & Carnrick 182. Fulton St. New York, will be pleased to send a sample package to any regular practitioner desiring it, in doing so please mention this Journal. See advt.

A second-year medical student, who devoted himself to the dissection of a defunct dude, was struck with the homologues which he discovered. It is now suggested that the dude is the long-sough-for missing link, the absence of which has always been the weak spot in the Darwinian theory.

If you have a student under you who whishes a good and cheap skeleton, have them correspond with Albert Beck, Janitor St. Louis Medical College. 7th. Myrtle, we can personaly recommend him.

Rev. Mr. Beecher, in referring to his trip to Europe, says he agrees with Dr. Thomson, who said when he came on deck, that the ocean looked like one vast dose of ipecac.

A few drops of ammonia on a moist cloth will quickly remove finger marks from windows and mirrors.

Any regular Physician can obtain a sample six-ounce bottle of Murdock Liquid food by applying to the Firm and mentioning this Journal. See advt. in this Journal, Murdock Liquid food Co. Boston. Mass.

The following placard hangs up in a Tennessee store window:

Peppermint Ile for
Head ake
Belly "
Toth "

SUB-NITRATE BISMUTH,

Manufactured by the MALLINCKRODT CHEMICAL WORKS, ST. LOUIS, is absolutely pure, free from acid smell and taste so objectionable in some makes, very white, bulky and superior. Physicians are requested to convince themselves of the excellent quality of this article by a careful trial and examination.

Always Specify "MALLINCKRODTS."

In the August Issue of the *New Orleans Medical and Surgical Journal*. Dr. S. M. Bemis makes a report on Yellow Fever in Louisiana in 1878, and subsequently, in a thirty-six page article, illustrated by four large charts, it is well writen and will repay any one to send for the August No. and read it.

The St. Louis Medical College have added two new professors to their already able corps, W. E. Fischel. M. D. professor of Hygiene and Forensic Medicine, and R. Luedeking M, D. Professor of Pathological Anatomy.

Harry Hodgen, M. D., Son of John T. Hodgen M. D., has been apointed Curator of the Museum.

C. H. Hughes M. D., Editor of the *Alienist and Neurologist* is to lecture on nervous diseases.

Leopold (*loc. cit.* S. 189), subsequently confirmed by Rein, (*Arch. f. Gyn. Bd.* IX. 1876, S. 414). The view is substantially this; that the lymphatic spaces are enlarged by the accumulation of lymph and this is apparently the same opinion as Klebs (*Handb. d. Path. Anat.* 4th. *Lief.* 1873, S. 887.) holds. Smooth walled cysts, without special membrane, arising from enlarged lymph spaces, degeneration of the walls. In the case reported by Rein (*loc. cit.*) the smaller spaces were lined with endothelium which proves the origin to be from the lymphatic or blood vessels; since no blood corpuscles are found and blood vessels can be separately seen, the origin is from the lymphatics. That the endothelium is wanting in the larger cysts is explained by assuming degenerative changes. So instead of explaining the géodes of Cruveilhier by stating that there is serum outside of the vessels, we have the lymph spaces dilated. But on the contrary the connecting link between the œdematous patch, so-called, and the small cyst has not been seen nor are the lymph spaces necessarily lined by endothelium. We have no satisfactory explanation why this lymph stasis takes place; twisting of the pedicle, although fibro-cysts are usually subserous, is not always present, neither are there always local or general circulatory disturbances. The last explanation by Coe (*Am. Jour. Obstet.* Oct. 1882.) is that the contractile element of the tumor, setting up local points of compression of the lymph spaces thus favors dilatation. But this explanation would be an excellent one for the occurence of of degenerative changes also. The most reasonable theory of cyst formation then appears to be dilatation of lymph spaces, producing a géode or œdematoue patch, later a cyst.

The cyst walls vary much in appearance being generally rough in the lower cysts, probably from degenerative changes, see Demarquay (*L'Union Med. Sept.* 1868). Beatly, (*Brit. Med. Jour.* Nov. 1881. *et al.*). Most of the old cases show a condensation of the tissue about the cavity resembling, even microscopically, a true membrane.

The contents of the cyst vary exceedingly, quite as much as do those of other cysts. They may be purulent, sanious, serous, necrotic; even masses of lime salts have been found. The spontaneous coagulation of the fluid (Atlee, Diagnosis of Ovarian Tumors, Phila, 1873, p. 263 *et seq.*) cannot be relied upon in diagnosis. Wells (oral communication to Leopold *loc. cit.*) has seen

such coagulation in an ovarian cyst and on the other hand Heer (Ueber Cystofibroiden der Uterus, Zurich, 1874) found it present only ten times in sixty five cases examined. Nor, were this absolute in diagnosis, is preliminary puncture safe since of eleven cases that were punctured ten died, (Leopold a. Fehling, *loc. cit*). Nor indeed is the fibre cell on a much more stable basis than the Drysdale corpuscle. The young cyst, the spontaneous coagulation, seems to take place pretty constantly, probably owing to the absence of degenerative changes. Certainly then we must look to other sources than to the fluid for an exact diagnosis.

New York, June 1883.

Reports on Current Diseases.

Article XLII.

Epidemic Cholera. By M. J. Epstein. M. D., of St Louis.

In the following essay I do not propose to offer anything original, but will endeavor to give a brief resumé of the history, etiology, prevention and treatment of Epidemic or Asiatic Cholera.

In 1818 the Western world was startled with the intelligence of the appearance in India of a disease which was ravaging Bengal. Many thousands were swept away by the pestilence in the course of a few weeks. There might have been such a disease in the mist of the past ages, but the memory of living man possessed no vivid or substantial knowledge of it. It burst upon the suffering generation with the violence of an unheard of plague; impressing all with dread and consternation. From this starting point in India, cholera spread east and west. In May 1831 it was severe in Moscow and Warsaw. In October 1831 the first cases appeared in England, and prevailed there for 14 months. It crossed the Atlantic and reached Quebec in 1832. Since 1817 epidemics of cholera have been frequent all over India, so that the disease may be said to have been naturalized there; causing a large mortality among all classes.

The Western world was again visited in 1848, 49, in 1853, 54, in 1866 being particularly severe in 1868, and returned again in 1873.

Neither climate nor season, nor earth, nor ocean seem to have arrested its course, or to have altered its features.[1]

Late researches have undoubtedly proved that India is the birth place of cholera. In other countries it never originates, but epidemics of cholera occur thereby, that the diseased germs are brought thither and find favorable conditions for develpment and increase. When the first epidemics of cholera started on their march around the world, they followed the routes of com-

1. Goodeve.

merce, and travelled from one great centre of population to another; it is now known that the disease pursues no defined course and in fact spreads in all directions; according to the freedom of communication.[2]

A specific cholera germ has not yet been discovered. Cholera is not contagious in the ordinary acceptation of the term. It is supposed that the patient has the undeveloped germs in his body, but does not convey the disease by contract nor through the atmosphere; many facts tend to show however, that the transportable germs are contained within the dejections of the patient, and in such a manner that fresh evacuations are only exceptionally capable of infecting, but become so later, after the lapse of several days, whether it is because the parasitic germs of disease become matured, or whether they become greatly multiplied.

According to the observations of Thiersch fresh evacuations of cholera patients are harmless to animals, while feeding them with old evacuations produced the symptoms of cholera. Bartholow says. "Physicians and attendants in cholera hospitals are not more exposed than others, during the existence of the epidemic unless a local source of infection occurs. That the dead dodies of cholera patients possess no infections property. As the morbific material leaves the person of the sick it does not appear to have toxic power, but acquires this subsequently. Hence the disease is not communicated directly from one person to another: an intermediate condition of preperation is necessary."[3] Since we recognize the fact that cholera is conveyed to healthy persons only by means of the dejections of cholera patients, the former puzzling manner of its spread has been satisfactorily solved.

It is easily understood that cholera travels from one place to another much more rapidly now than it did formerly, since we have steamboats and railroads. It is not strange that cholera follows the roads of travel, that it sometimes spreads with the wind and sometimes against the wind.

The great jumps which cholera epidemics not uncommonly make is explained thereby, that a cholera patient who takes a journey only infects those places in which he leaves dejections, while all other stations remain exempt. It sometimes occurs, that in a village to which cholera has been brought, only those

2. Bartholow.
3. Bartholow.

persons become affected, who inhabit some house or use the same water closet. It has been observed, that in several cities the repeatedly introduced cholera always remained house epidemics. In other cases cholera spreads from the house to which it was brought, over neighboring streets, over large sections of the city or over the whole city.

Pettenkoffer proved that a porous condition of the soil, through which the contents of privies mixed with cholera germs can readily pass and saturate large tracts of land, favors the spread of the disease. As a rule it undoubtedly reaches the system through the respiratory organs. The use of infected privies are therefore so dangerous, because they are the usual site of cholera germs. From the privies the poison reaches the houses. Biermer contends that the houses are more contagious than the inhabitants. Cholera also spreads rapidly when the drinking water is supplied from the surface drainage and hence is rich in organic matter. No age, no sex, no constitution manifests an immunity to the disease. [Niemeyer; Bartholow.

The cardnial ponts in the prevention of cholera are, isolation of the patient, removing him and his discharges out of the vicinity of healthy individuals, preventing persons from approaching localities and houses where cholera prevails, careful disinfection of discharges, and clothing, as well as houses and privies of patients, and avoiding taking cold and errors in diet.

The dejections of a cholera patient should never be poured into a privy, and should always be disinfected at once. Carbolic acid at the present time is considered the most reliable disinfectant. Permanganate of potash ranks next. Bartholow recommends a solution of chloride of zinc. When practical, the linen of cholera patients should be burned, or else thrown into boiling water. Articles of clothing should be hung up in an atmosphere of sulphurous acid for a number of days. Physicians should urge the establishment of hospitals for the patients, isolating them from the outer world. It is important that during an epidemic diarrhœas should be attended to promptly, for which the best remedy is opium. The following combination for the premonitory diarrhœa Bartholow finds very efficient chloridyne

℞
Acid Sulph. Arom.
Tr. Opii Deod..... ā ā℥j.
M. Sig. Ten or Thirty drops in water, every hour or two.

is also very useful. For the diarrhœa as well as for the copious rice water discharges hypodermic injections of morphia and atropia are highly recommended. In India the first medicine given is one or two grains of opium with one or five grains of calomel. If this dose is retained probably little more medicine will be required. When there is vomiting, there is more difficulty. Apply a sinapism to epigastrium, give the patient small pieces of ice to swallow frequently, and occasionally some effervescent drink. Morphia hypodermically is still more efficient; Barthalow also recommends chloral either with morphia or in alternation with the latter remedy. Stimulants are not necessary unless the pulse begins to flag; then brandy and a little ice water should be given a teaspoonful at a time. Cramps are relieved by friction with chloroform or turpentine; if severe, by the inhalation of small quantities of chloroform. When the algid symptoms appear, the extremities should be kept warm by hot bricks and warm cloths. Intravenous injections of water, and transfusion of blood have been practised in order to prevent thickening of the blood. In incipient collapse, Prof. Horner's method consisted in the administration every five minutes of small doses of chloroform, laudanum, camphor and ammonia; each dose being accompanied by a small piece of ice to promote its retention by the stomach, while sinapisms were applied to the epigastrium, and back and limbs were rubbed with whisky and red pepper to produce reaction. When collapse is complete, opium should be entirely avoided. In the worst stages of collapse, stimulants are of little avail. Nothing is more pernicious than the system of pouring large quantities of brandy into a pulseless patient in cholera. If stimulants are of use, they make themselves felt at the pulse. The best thing for the patient in the stage of collapse is to gratify his instinctive desire for cold water. It is of no use to keep up the patients vomiting by giving him as much as his morbid thirst impels him to swallow, but a considerable quantity may be given by tablespoonfuls at a time, so as not to provoke vomiting. In those cases in which the collapse is not perfect, in which the circulation still goes on stimulants when continuously given may be of use. Volatile stimuli, aether and ammonia are then beneficial, ten or twenty drops of Liq. Ammon. thirty of sulpuric ether properly diluted with ice water, given every half hour or hour,

with an occasional tablespoonful of brandy and water, may be continued while the pulse seems to be mantained there by. The principles advocated in the use of stimulants are that we should be guided by the pulse. While that remains, absorption and other vital actions go on, though perhaps in a diminished degree.

As soon as it is found that the pulse maintains itself without them the stimulants should be withdrawn, the alcoholic first. When reaction occurs give the patient a little liquid food and cold water. In children, cholera must be treated upon the same principles as in the adult. It is necessary to be cautious in the administration of the laudanum. Sal. volatile and Tr. Camphoræ are the best stimulants, occasionally a little brandy in iced water.

Periscope.

Article XLIII.

Women's Figure.—My article on the "Health of American Women," published in the *North American Review* of December last, and devoted to the corset, has been republished almost everywhere that the English language is spoken. It has appeared in a number of English magazines and papers. *Knowledge*, Prof. Proctor's London Magazine, has republished and discussed it.

It has been republished in Canada, and has elicited among our earnest neighbors much spirited discussion.

A Canadian medical man leads off with the statement that the respiratory function in woman is performed by the upper part of her lungs, and therefore, that a graceful, artistic reduction of the waist, does not injure health. Following this letter, one mother says that in trying to reduce the size of her daughters' waists to the proper dimensions, she had found it necessary for them to wear their corsets during the night. It has been her custom to lace them close on going to bed, so as not to lose during the night the good which the corset has accomplished during the day. But her daughters cut the cord in the night, and she found that the only way to secure non-interference was to whip them soundly on going to bed. Another mother writes to express the opinion than whipping is unnecessary, but that, coming upon the same difficulty, she had tied her daughter's hands in front with a silk handkerchief, and thus kept her from interfering with the cords. Another mother writes to say that she has a much better method than either of these; which is to lace her daughters to the proper dimensions on going to bed, which, like the others, she has found absotutely necessary, (as the swelling at night spoils the work of the day), and then she puts a chain about the waist, padlocks the chain, and puts the key in her pocket. This, she insists, accomplishes all the good that the other methods do, and is less humiliating to the girls.

Much that has appeared on the corset in the Canadian papers,

is highly interesting, and strikingly illustrates the law, that cold climates produce great courage.

Perhaps the most remarkable contribution to the corset discussion comes to us in a large and beautiful book, by a distinguished author, published in New York recently, and devoted to women. In this book there are many remarkable statements about dress. We give a few samples from the corset chapter. This book represents the popular ideas about the corset, and therefore we use it as a text.

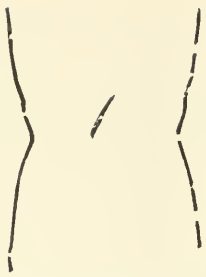
The following is our first quotation from the book before us:

"The anatomists, who have seen thousands of skeletons of savage or civilized training, find always the diminishing waist in women."

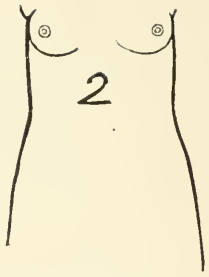
To discover what "anatomists have found," we turn to standard works on anatomy, and find two figures—one of a man, and the other of a woman. These figures show what "anatomists have found." The waist of the natural woman, as seen in these anatomical works, is larger, compared with her shoulders, than the waist of the man compared with his shoulders. The man's chest tapers. The woman's does not. This is what "anatomists have found." They have *never* found what our author says they have *always* found.

The six outlines on the opposite page are copied from Marshall's Great Anatomical Atlas, which is the highest authority. The lines show the difference between the form of a man and the form of a woman. One peculiarity of man's chest is that it tapers from the shoulders down to the waist. Woman's chest does not taper from the shoulders down to the waist. The man's waist is smaller compared with his shoulders, than the woman's waist compared with her shoulders. The dressmaker says that this shape in a woman's chest is in bad taste, and she sighes with a weight of responsibility when she reflects that after the Creator has finished His work upon a woman, it takes her twenty years to squeeze that woman into artistic shape.

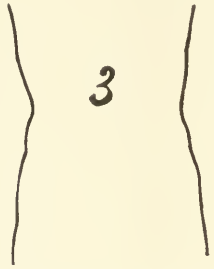
No. 1 is the form of a man's chest given by the highest anatomical authority. The chest is the half above the center. No. 2 is the female chest. Fashionable people will say that this is a great mistake; that No. 2 is an absurd form for a woman's chest; that it should be from 30 to 40 per cent. reduced at the waist. The anatomist quietly repeats his statement that No. 2 represents the natural and perfect female form.



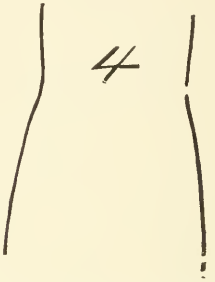
Front view of the outlines of a man's chest as given in Marshall's Anatomical Atlas.



Front view of the outlines of woman's chest as given in the same great work.



Back view of the outlines of a man's chest as given in Marshall's Anatomical Atlas.



Back view of the outline's of woman's chest as given in the same great work.

Side view of the outlines of man's chest as given in Marshall's Anatomical Atlas.

Side view of the outlines of a woman's chest as given in the same great work.

These outlines are taken from Marshall's Anatomical Atlas, because the authorities will not be questioned. No author stands higher. It may be added that all anatomical authorities agree in regard to the respective shapes of the male and female chest. The authors of our fashion plates regard these opinions of anatomists as "perfectly horrid."

While Nos. 1 and 2 represent the shape of the male and the female chest, (front view) as given by the higest anatomical authorities, Nos. 3 and 4 represent the same (back view). No. 3 represents the tapering male chest; No. 4 represents the perfect female chest without taper. The dressmaker will sneer, and the corset devotee scold, but the anatomist calmly repeats his statement that these two figures represent nature.

Nos. 5 and 6 represent the male and female chest respectively, giving the side view. And even in this view, which gives woman's chest at a peculiar disadvantage, her waist is larger in proportion to her shoulders than man's. The side view gives woman's chest at a disadvantage, because man's waist is much rounder than woman's. The corset changes the form of woman's perfect waist into a round form. Woman's waist, as seen in the side view, seems, on account of her flattened form at the waist, to be smaller than it is when seen either in the front or back aspect.

To show how completely common sense may be overwhelmed by fashion, I quote another sentence from our author. Noticing that a corseted woman breathes with a heaving motion of the upper part of the chest, our author says:

"A woman breaths with her upper ribs and lifts her collar bones. In her, this is evidence of sweet and glorious health."

So completely changed has woman's respiration become, under the corset, so constantly is she seen pumping for life with the small, upper end of her lungs, that even some medical men have fallen into the curious blunder that woman's respiration is accomplished with the apex, or little upper end of her lungs; and that the large part of her lungs, the lower half, several times as large as the upper part, has very little to do with her respiration.

I have frequently studied the respiratory act in a dancing-room. The young man with his partner, dances through a figure. When the minute for rest comes, he takes a deep breath, filling the large, lower half of his lungs, and stands at ease. Does the young woman take one deep respiration, filling the large, lower half of her lungs and thus obtain relief like her companion? As long as she stands where I can observe her, that curious heaving of the upper portion of the chest goes on.

Again we quote from the large and beautiful book. "A woman breathes with the upper ribs." * * * "A woman always

breathes with her thorax." * * * "A man, on the contrary, always breathes with his abdomen. This is God's plan."

When a Chinaman, pointing to his small footed wife, hobbling about, declares that "God's plan for woman is a small foot and hobbling gait," it is not surprising, because he is a "Heathen Chinee." But when our women squeeze the lower and larger part of their lungs down to two-thirds of their natural size, and one-third their natural action, and then breathe with a heaving motion of the upper part of the chest; for a civilized man to point to that performance, and say that it is "God's plan," is too bad.

Our author says, "A man always breathes with his abdomen."

Curiously enough we had always supposed that a man breathes with his lungs. It is true, however, that the air is expelled from the lungs by the abdominal walls, as it is taken into the lungs through the action of the diaphragm. We assume that our author understands this, (although he says exactly what we have quoted) and we desire only to call attention to his statement that while men have this abdominal movement in breathing, women have none of it. Now the fact is, women have more of it than men. But let us make an exact statement. If the lower part of the corset, that which is made to spread out and cover the lower part of the abdomen, be removed, and the dress about the waist be left with the usual constriction, the movement of the abdominal walls in woman, would be at least twice as much as it would be in man. And for the simple reason that as the movement of the floating ribs is restrained, there must be some compensation. That compensation is found, in very small part, in a labored movement of the upper part of the thorax, but three quarters of it must be found in a free movement of the abdominal walls. With the corset arranged to cover and press upon the lower part of the abdomen, even the abdominal movement is restrained, and respiration becomes labored and deficient. With the complete corset applied, every part of the lowest portions of abdomen that can give way, does give way to make room for air in the lungs. And exactly this is the cause of a large part of the pelvic dislocations, the treatment of which furnishes doctors half their business.

We quote again from the large and beautiful book.

"After all the lecturing on tight-lacing, the truth is, that Nature demands, by her most imperative laws, that women should have small waists." This is a curious use of words.

The writer of this strange sentance must know that anatomists and artists all agree that woman's waist is relatively larger than man's; that no anatomist or artist has ever expressed the contrary opinion. Yet our author tells us that "Nature demands by her most imperative laws, that women should have small waists." This statement cannot have sprung from ignorance. It is impossible. No one who can write a grammatical sentence, and has given any attention to the natural shape of a woman's chest, can be so ignorant. Then what is the object of such mischievous nonsence? One is almost driven to the conclusion that the writer is seeking the favor of the votaries of fashion.

One of the most notable features of the book we are reviewing is a mysterious use of words. The following paragraph we have read over ten times at least, but up to this moment fail to apprehend the thought. We shall continue to try. Here is the sentence.

"The reason of the female form, the scanty waist, the strong but narrow diaphragm are a part of the diplomacy of nature, and mean the resistance of our occasional growing force, which, with a man's natural form, would obstruct the action of the heart and impede the respiration."

This is a remarkable paragraph, and in this book, which is having a large sale, and is very much commended, there are many equally lucid statements. This peculiar kind of lucidity characterizes the volume. It belongs to a class of literature, which, saying a great deal, says nothing. One reads a page on some important health subject, and wonders what it means. Reading it over again, he is in still deeper doubt about the aim of the writer. One is reminded of the remark of Sir John Sinclair:

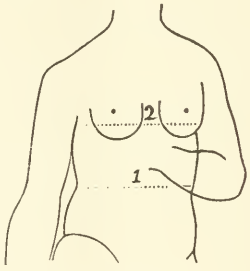
"The speculator is always to be suspected when, forsaking dlain, direct facts, he involves his want of meaning and conscious ignorance, in learned words and metaphor."

We place before the reader on the two following pages five pairs of outline figures carefully reproduced from celebrated works of art. Under each is found a description of the statue. These works of art are acknowledged by the anatomical and artistic world as faithful reproductions of nature in her most perfect forms. In every case the space between the two dotted lines marked 1 and 2 represents all that portion of the chest which can be shown without introducing the arm. It will be

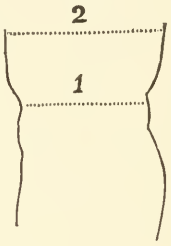
seen that the general statement, the male chest tapers from the shoulders down to the waist, and that the female does not, is entirely borne out by these outline sketches.

In addition we present in a group two figures, one of which is perhaps the most admired of all the famous Greek representations of a perfect woman, while the other is copied from one of our fashion-plates.

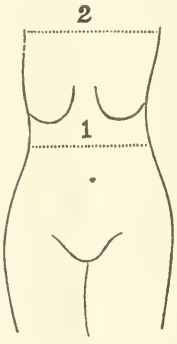
These famous statues admired by the anatomical and artistic world as perfect female figures are what "anatomists have found." The extract from the large and beautiful book which we have quoted,—"that anatomists have always found among women the diminishing waist," is simply not true.



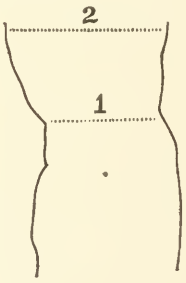
Front view of the outlines of the chest of Cleopatra.



Front view of the outlines of the chest of Alexander the Great.



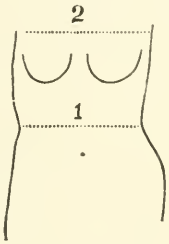
Front view of Taouas, mother of Sesostris.



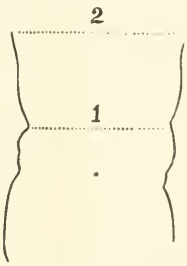
Outlines of the form of Brutus.

To illustrate still further the blinding power of fashion, we give a published opinion of Dr. Alfred Chadwick, who has written

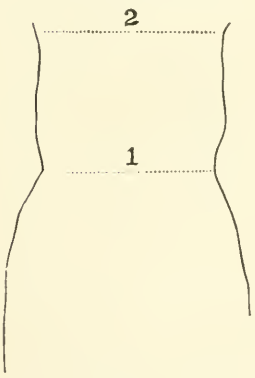
some notable papers for *Knowledge*, Prof. Proctor's London magazine. Dr. Chalwick says that both boys and girls should, between seven and ten years of age, put on corsets, and after that, not allow their waists to enlarge.



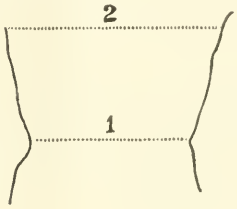
Front view of the outlines of the chest of Julia Pia en Iole.



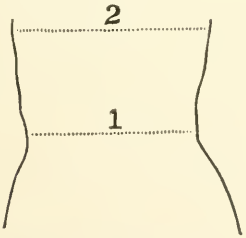
Outlines of the chest of Hercules.



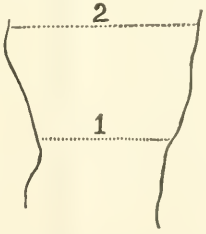
Front view of the form of the Venus de Medici.



Nearly front view of the outlines of the form of Hercules.

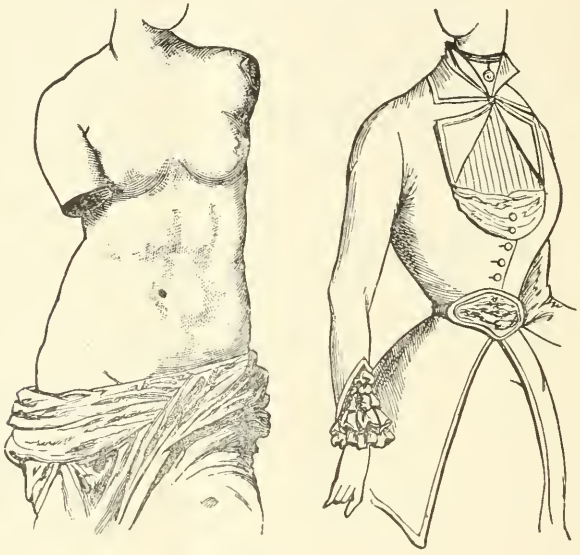


Nearly front view of outlines of the Venus de Medici.



Three-quarter front view of Laocoon.

A distinguished Chinese writer, far more learned than Dr. Chadwick, in discussing the size of a woman's foot, urges that if the little girl's constitution be strong, so that she can bear the pain and sleeplessness, her foot should be reduced to four inches; and comments with warm approbation upon the courage and thoroughness which, in many cases under his observation, have accomplished greater success; mentioning with admiration and



The above statue, the Venus de Milo, has long been regarded by artists as one of the best representations of a beautiful and perfect woman which the art world can show.

By its side we place a picture from a fashion magazine.

pride, one case in which the entire length was less than three inches.

While this Chinese custom is far less destructive than tight-lacing, it inflicts serious harm in many ways, though it must be confessed that Chinese doctors think it beneficial to health. The Chinese woman with the small feet has passed through several years of great suffering. One who has had years of observation says: "During the first year the pain is so intense that the little girl can do nothing but lie and cry and moan. For about two years the foot aches continually. Finally the parts become wasted and bloodless, and the limb insensible." Not only has the woman passed through years of suffering, but when her feet

become insensible, and her long torture is ended, even then she is unable to walk much, and another source of ill-health comes in her lack of exercise.

Perhaps it is unnecessary that I should argue that such treatment of the feet is harmful, though I do not forget that 300,000,000 of intelligent people believe in small feet. We do not. We believe that our feet, like our heads, should be left free to grow to the natural size and shape.

During a Pacific Ocean voyage, I had long conversations with a remarkably intelligent Chinaman. I doubt if I ever met a more discriminating philosopher. He seemed to be void of prejudice. Most heartily he accepted the good in western civilization, and was delightfully rational, till I spoke of the small feet of Chinese women. Then he reminded me of the lunatic who was perfectly sane till the prophet "Ezekiel" was spoken of, when he whispered, "I am Ezekiel." This wise Chinaman said, as soon as I alluded to the small feet of his country-women :

"The small feet involve a great deal of suffering, and make locomotion difficult, but of course no woman could be a true lady with large feet." Probably it would be difficult to find a Chinaman who can rise above this cruel prejudice. It is somewhat difficult to find any one among us who can see beauty in a natural female form, while the wasp-waist fashion prevails. When we return to the classic or natural form, the wasp-waist will be hideous.

When the reader has reached this point, will he kindly look over again the outline figures from Marshall's Anatomical Atlas and the outline reproductions of the famous statues. Please study these drawings until you fix in your mind "God's plan." When you come to believe that the Creator has good taste, and has done His work on woman's body well, your views of the dressmaker's work will change. You will think, considering the vital organs involved, that the corset maker is woman's most deadly enemy.—[*Dio Lewi's Monthly.*

Editorial.

Article XLIV.

THE VACCINE VIRUS QUESTION.

The widespread and threatened epidemic of small-pox in many sections of our country in 1881-82, and consequent great demand for cow-pox virus, gave rise to many speculative enterprises for the production of this important material. That such enterprises are commendable and worthy the notice and patronage of the profession, cannot be denied by any one whose knowledge enables them to appreciate the great immunity from small-pox, afforded by a *perfect* vaccination. Vaccinia accompanied by *all* of the local and constitutional manifestations of the disease, in its beneficent results to humanity, either in the individual or community, by arresting one of the most frightful diseases known, accomplishes one of the grandest objects in the whole domain of medicine or surgery; hence the great importance of a disease that is simply *perfect*. On the contrary but in a *negative* sense we see the great importance of a vaccination that is imperfect, spurious—the red raspberry mark, nothing.

Among the speculative enterprises of this kind, offering through a neatly printed circular, genuine bovine virus to the profession, boards of health, drug, trade etc., was one started near St. Louis in Sept., 1882, under the name of the St. Louis Manchester Vaccine Farm. The circular in which they laud so highly their bovine virus is signed by a well known physician of this city, *manager*; and R. C. Tunstall, (no M. D.) *proprietor*. From which the reader would infer that the Doctor superintends, or actually performs the operation of vaccinating the heifer with the bovine virus and collecting the same, and that R. C. Tunstall is ownership of something connected with the enterprise. Investigations do not confirm such inferences.

The great failures with vaccine in our city in April, '83 with its serious consequences (prompted us) in (connection with the Board of Health) to make enquiries as to the cause and source of material supplied and lay before our readers, such facts relating thereto

as may be pertinent to the subject. In Sept., 1882, prior to the time this enterprise began, the St. Louis Board of Health, actuated by motives of economy for the public purse and in accordance with legal requirements of the city statutes let bids to all producers of cow-pox virus near St. Louis, for vaccine supplies for the ensueing year (ending May 1st, 1883). The bid of this firm was one-half of a cent lower for a vaccination for half quill than that of any other bidder; and though at this time they had never vaccinated a single animal, yet the Health Commissioner, impressed with the idea that the Doctor being an educated medical man and that he would prepare a proper material, awarded the contract to these parties. St. Louis had little or no small-pox during the latter part of the year 1882 or first part of 1883. Consequently but little of the *new* material was used for vaccinating, the results of which certainly did not receive the attention from the health authorities, the subject demanded.

In March, 1883, however, they had reason to seriously test the virtue of the products of this enterprise. Small-pox made its appearance in ten school children, all classmates in a school-room where a little girl attended daily, whose sister at home had variola, with which she died. Small-pox numbering its victims so rapidly the health authorities with commendable zeal and activity, took measures for arresting it. Physicians were sent to all public and private schools in the infected district, and this material applied freely to the arms of both children and teachers private practitioners in the locality were supplied with it and as many as one thousand vaccinations made daily until over ten thousand individuals were vaccinated. Within two weeks after the first vaccinations, examinations were made to ascertain the results, when not one perfect vaccination could be found. Public vaccinator and private practitioner could report nothing but failure—spurious or imperfect vaccination. Another week's loss of valuable time was required in making a thorough and satisfactory examination of all the work. The results ascertained were about the same as just reported.

*The Dr. himself asserting full confidence in the virus and thinking it had not been properly handled, obtained permission

*It is due the Health Commissioner Fitzwilliam to say *en passant*, that such failures being ascertained he at once annulled the contract, arranged with a reliable vaccine producer of years' experience, for material that proved entirely, satisfactory, etc.

of the Board of Health to vaccinate at the public schools. He in company with Dr. Outly, one of the vaccinating corps, made over one hundred vaccinations, the majority of which were on unvaccinated children—*primary* cases. On the sixth day after the work, examinations by the Dr. and Dr. Outly, as reported by Dr. Outly, showed the same results as above.

Drs. Spiegelhalter and Luedeking, of the Board of Health, visited the farm, had quills dipped in the material on one animal then redipped on another animal with which on their return to the city they vaccinated children; even with this entirely fresh material, the results were negative. The genuine bovine virus as represented in the circular, after being thorougly tested, proved, as genuine a fraud as was ever put upon a community.

In regard to the material issued by the St. Louis Manchester Naccine Farm when the circumstances of its production are known, its complete failure is not astonishing. The all important matter of vaccinating the animal and collecting the lymph was not performed or even superintended by the Doctor, he rarely being present during either operation; but left to Mr. R. C. Tunstall, a *dry goods merchant*, a man as ignorant of the distinguishing characteristics of pus and lymph as of any other medical question; he often entrusting it to hired assistants, eqally as ignorant of such matters as himself. To these uneducated, inexperienced individuals was committed the responsibility of preparing a material so important as vaccine virus. The serious consequences of the spread of small-pox as a result of the loss of time in using this worthless material, can be but little appreciated, by a mere statement in numbers of those taking the disease or dying from it.

What the results elsewhere have been, we have not sought to ascertain. Advertising in their circulars as having the patronage of the St. Louis Board of Health "on account of the virtue of their virus," would be considered by some, evidence that they were supplying a proper vaccine and any one wishing vaccine would patronize them. These circulars were doubtless scattered throughout the country and the presumption is that a great deal of the material under the name of cow-pox virus has been used elsewhere than in St. Louis. One large drug firm of this city receiving a *large discount*, sent out in its business channels, material for hundreds of vaccinations.

Our own individual experience in the use of vaccine lymph

taken from the bovine species in the past *five* years warrants us in saying that we have seen more *perfect* results from lymph of this kind than from that of any other source, but it is fair to presume that to obtain perfect results, the lymph must be prepared by an *educated* and *experienced* person. We hope our newly created State Board of Health while enquiring into the things that affect the public health, will examine all of our vaccine institutions. Certainly nothing of more importance could occupy their attention.

The new law regulating the practice of medicine needs some interpretation. It is not very skilfully worded, nor does its language in every instance express what seems to have been intended. It has one large loop hole badly guarded. In section I. it reads "If a graduate of medicine shall present his diploma *of* the State Board of Health for verification as to its genuineness." Here is a period to an unfinished sentence, and the misuse of a preposition.

What graduate is meant; one that *shall be*, or *all that are*? If the latter, what is meant by the proviso in Section II.?

In Section V. we read, "Every person holding a certificate from the State Board of Health shall have it recorded," etc. Is every physician to apply for and receive a certificate under this section? If so, then the proviso in Section II. conflicts with Section V.

In Section VIII. we read: "The State Board of Health may refuse certificates to individuals guilty of unprofessional or dishonorable conduct, and may revoke certificates for like causes," etc. How is this section to apply to persons embraced under the proviso of Section II.? Are these five-year doctors required to get certificates? If not, what is to be done with such doctors guilty under section VIII.?

In Section X. we read: "Any itenerant vendor of any drug, nostrum, ointment or appliance of any kind intended for the treatment of disease or injury, or who shall by writing, printing, or any other method, publicly profess to cure or treat diseases, injuries or deformities, by any drug, nostrum, manipulation or expedient," etc. This is classical English! Which is the antecedent of who? If "itenerant vendor" then it is redundant. If not, then the section cannot express what was intended. Let us see: Here is a man who uses "electrical baths," and advertizes

far and wide; such an apparatus, or "expedient" is never taken around and offered for sale as a nostrum. Are such things, then included by this section? If so, the writer of the section must have forgotten the antecedents of who, or applied to him something he never was known to do. Then again, what is meant by *manipulation*? Is the manipulator a faith doctor, or a rubbing doctor? If so, such manipulations are never sold, and hence the "vendor" can not be made to pay the tax prescribed. Or does the section require that the "vendor" shall "profess" to do the things named in order to be subject to the tax? Or are we to understand that such a "profess"—or—Ichabod! what is that word coming to!—shall be an itinerant? and an itinerant *vendor*? What *is* the antecedent of *who*.

Then again, is such a vendor and professor to be regarded as a *physician*? If not why class such mountebanks among respectable doctors? If yes, then how does the proviso of Section II. apply to all such? are we to regard this proviso as allowing all doctors of whatever kind, grade or degree, who have been practicing *their profession* for five years, to be excepted from the operations of this law? If so, then how unfortunate for all doctors "born out of due time." What a favorable discrimination in favor of the five-year physician, quack, mountebank, patent medicine vendor, *et id omne genus*. Give us immunity from such a discriminating law. H. C.

We call attention to the many subjects of interest treated in this number of the JOURNAL. In our next issue we will publish two interesting articles on Bromo Ethyl, one by Professor Jno. H. McIntyre, M. D., of St. Louis, and one by Dr. A. E. Prince, of Jacksonville, Ill.; also an article from Dr. P. W. Logan, of Knoxville, Tenn., on Naso-Pharyngeal and Aural Catarrh.

We have been greatly pleased at the manner in which our delinquent subscribers have payed up, but still there are some who have not kept their word, and remitted, as they stated they would, in the first part of the year.

The subscription list of the JOURNAL, of late has been steadily on the increase, but still it is not as large as we wish it to be.

From this issue on we will furnish a limited number of reprints, not to exceed fifty, free to contributer of original articles

and we will say here that *short articles of facts* are the ones most desired by all readers of the JOURNAL.

If any contributer will furnish us wood cuts for any illustrations in his articles, we will have the electrotypes made at our expense and send him one hundred reprints gratis.

Correspondence from any part of the country on any subject of *interest* is always welcome and will recieve prompt attention.

FOR the benefit of any subscsiber whose subscription has run out and wishes to renew, or any one who has overlooked his subscription and who wishes to pay his arrears, there will always be, after this, a blank in the advertising leaves for him to fill out and send to the JOURNAL with the money.

Book Reviews.

Article XLV.

Lessons in Qualitative Chemical Analysis. By Dr. F. Beilstein, Professor at the Imperial Institute of Technology of St. Petersburg. Translated from the Fifth Edition, with Copious Additions Including Lessons in Organic and in Volumetric Analysis. By Charles O. Curtman, M. D., Professor of Chemistry in the Missouri Medical College and in the St. Louis College of Pharmacy. Illustrated, 12mo., pp. 154. Price in cloth, $1.50. [St. Louis: St. Louis Stationary and Book Co., Publishers, 1883.

This book is intended entirely for the student; it is well written and presents a neat exterior. The book begins with instructions in the common manipulations of the laboratory and proceeds, step by step until the student has mastered the primary points in analytical chemistry, and then gives him more difficult examples and problems to work out. After each chapter of examples a short chapter is added, giving instruction for systematic examination of the substances.

By the aid of this book the student can somewhat dispense with the continual presence of an instructor. As the author has joined to the translation of Beilstein's latest Edition, an outline of instruction as to the manner in which to proceed, and sufficient notes to enable the student to proceed for himself.

Altogether the work is very creditable and I have no doubt but that it will come into general use in the laboratories of colleges.

Treatment of Diseases of Infancy and Childhood, with over Four Hundred Formulæ and Prescriptions, as Exemplified in the Service of over Twenty-Six of the most Prominent Physicians in the Hospital and City of New York. By C. H. Goodwin, M. D. 12mo., pp. 284. [New York: C. H. Goodwin, 1883.

The author has endeavored to give a thoroughly practical and at the same time concise résumé of the treatment as followed by eminent physicians of New York City. He has given the advanced practical therapeutical views of leading medical authorities, which in their experiences are the most approved and the most successful.

Medical publications of this kind are not frequently to be met with, but it can be seen that a book of this character might

be desirable when one wishes to consult the views of a multitude of living authorities of merited note. For this reason we think the work will be well received by the profession.

Medical Essays, 1842-1882. By Oliver Wendell Holmes. 12mo., pp. 445. [Boston: Houghton, Mifflin & Co., 1883.

"As he is everybody's favorite, there is no occasion for critics to meddle with him either to censure or to praise."—[*N. A. Review.*

We do not wish to censure Dr. Holmes for the very great pains he took to write his bull against that ever changing and dodging "profession" known by the trade mark as Hahnemannism, but desire to say that while he may have good reasons for its composition in 1842, probably thinking that he had a staple system to fire at, the present totally changed aspect of Homœopathy renders negatory its reproduction in this volume. Of course, the article is witty and true, now as then, but because of the very frequent failures of regular physicians to practice acceptably to many of the community, it was as barren of results in correcting public opinion, then as now; not so much because they fear that the cooing of the dove would not remove disease, but because they fear that the bite of the Esculapean serpent would be harmful. It would not be a difficult thing to prove that the practice of many regular physicians at that time, instead of being markedly beneficial to the sick, frequently reduced the percentage of their chances for recovery, which a purely "let alone" system would not do. The "old way of practicing physic" which he so successfully ridicules in his articles on "Currents and Counter-Currents," made it posible for *any* change in the method of treating the sick, to succeed, especially if it promised "to do no harm, if it did no good." He himself gives the reason for thesuccess of the "nill" doses of that day. * * * Will you think I am disrespectful if I ask whether, even in Massachusetts, a dose of calomel is not sometimes given by a physician on the same principle as that upon which a landlord occasionally prescribes bacon and eggs, because he cannot think of anything else quite as handy? I confess that I should think my chances of recovery from illness less with Hippocrates for my physician and Mrs. Gamp for my nurse, than it I were in the hands of Hahnemann himself with Florance Nightengale or good Rebecca Taylor to care for me. This plainly shows that it was the perniciousness of one kind of practice, and the harmlessness of the delusion that maintained this delusion before a very respectable portion of the enlightened community. Now why did not this acknowledged great man, in sentences, give the regular profession a good "yank" in the right direction? He saw all of this; why did he not write this article to fit the present times? If he had done so he would have done a great good to legitimate medicine which believes in no isms and is liberal and wise in its tendencies.

Like all of Holmes' books, this is a very readible work. His

views are unmistakeably and neatly put. No one will commence his last essay, and leave it unfinished without being restrained to do so.

Electricty in Medicine and Surgery. By Geo. C. Pitzer M. D., 2nd Ed. 8vo pp. 138. (St. Louis Mo. 1883.).

Last January Dr. Pitzer issued the first edition of this work, and, as we said on reviewing that edition, it would be well received by the profession. This is proved by its rapid sale, for that edition was issued in May last. We have carefully read this 2nd Edition and wish to commend it to those who desire to employ electricity in their practice.

This edition has been thoroughly revised and considerably enlarged, by the addition of several new chapters, embracing some of the most interesting subject connected with electrical therapeutics; of these may be mentioned electro-diagnosis, how to detect feiged sickness or malingering, how to make testes for life or death in doubtful cases, how to revive those suffering from asphyxia, or from over doses of chloroform taken by inhalation how to restore those who are suffering from opium or morphia poisoning, and how to cauterize with electricity.

The Microscope and its Revelations. By Wm. B. Carpenter. C. B., M. D., L L. D. Sixth Edition, 526, Illustrations Vol. II, 8 vo. pp. 354, New York. (W. Wood & Co 1883.)

This is the May number of Wood's Library of Standard Medical Authors and is the second volume on this subject the 1st, vol. contained nine chapters, and this one has twenty-three chapters and an appendix, the general features of the subjects are quite similar to works of this kind.

Chapters X. which is the first of this volume, commences the microscopical investigation of the Animal Kingdom, and this is continued in the next ten chapters. Chapter XXI is devoted to the application of the microscope to geology; chapter XXII takes up the consideration of the inorganic or mineral kingdom and polarization. In the last section of this chapter the subject of Micro-chemistry of poisons is treated of. By a judicious combination of microscopical and chemical researches, the application of reagents may be made effectual for the detection of poisonous or other substances, in quantities far more minute than have been previously supposed to be recognizable. Thus it is stated by Dr. Wormley, in 1879, that micro-chemical analysis enables us by a very few minute's labor to recognize with uneering certainty the reaction of the 100.000 part of a grain of either hydrocyanic acid, mercury or arsenic, and that in many other instances we can easily detect by its means the presence of very minute quantities of substances, the true nature of which could only be otherwise determined in comparatively large quantities and by considerable labor.

The appendix discusses the subject of Neumerical Aperture and Angular Aperture, A careful investigation of the whole subject of "Aperture", both theoretically and practically has of late been carried out with the greatest ability by Prof. Abbe, of Jena. The object of this appendix is to explain to the readers the precice meaning of Abbe's term, the volume closes with a short description of Watson's, Swift's and Nachet's microscopes.

Handbook of Electro-Therapeutics By Dr. Wilhelm Erb, of Leipzig, Translated by L. Putzel, M. D., with thirty nine wood cuts, 8 vo. pp. 366, New York, (W. Wood & Co. 1883.)

This, the June number of Woods Library of Standard Medical authors, is divided into five parts and an appendix of 210 pages, the latter being much larger than one half of the whole work. Part I. has three lectures on the physics of electricity, called physical introduction; part II. has three lectures on the physiological effect of electricity and this is called the physiological introduction; part III. has five lectures on the methods of electrical examination and electro-diagnosis; part IV. has three lectures on general electro-therapeutics, and part V. has an introduction and two lectures on special electro-therapeutics. The appendix is made up of twenty lectures, with the following subjects: electro-therapeutics of the psychoses, one lecture; diseases of the spinal cord, two lectures; diseases of the peripheral nerves, one lecture; paralysis and atrophy, four lectures; pain, neuralgia and neuralgiform affections, two lectures; spasm and contraction, one lecture; anæsthesia, one lecture; diseases of the cervical, sympathetic, vasomotor, trophic and allied neuroses—one lecture; central and other functional neuroses, two lectures; diseases of organs of special sense, two lectures; diseases of the organs of locomotion, the glands, the thoracic viscera, and the digestive apparatus, two lectures; diseases of the urinary and sexual organs, one lecture.

To those who wish to make a special study of electro-therapeutics, this is undoubtedly a most valuable work, as it is from a well known and an acknowledged electro-therapeutist, but for practitioner in general medicine it is far too minute. For the purpose of showing how exhaustively Dr. Erb goes into this subject we will quote a page and a half of the most important portion of his book:

"The human body is nothing more than a large conducting mass of definite resistance; and the laws controlling the distribution of large conducting masses therefore apply to it without any limitation.

These are the well known Ohm's laws, and their accurate knowledge is of the greatest importance to the electro-therapeutist. Only by constantly bearing them in mind and utilizing them in a rational manner will you be enabled to apply the current rationally and scientifically. I know of nothing in physics which is

of more importance to the electro-therapeutist that [than] an accurate knowlege of these very laws."

"1. The *strength of the current* (intensity-I) is in the first place dependent upon the electro-motor power (E) of the combination employed in its production, of the metals and fluids employed in the circuit, of the position of the metals employed in the tension series, of the strength of the inducing magnet or the inducing current, of the number of coils in the cylinders, etc. If all the other conditions are alike, especially the circuit of closure and the external shape of the individual combination, *the strength of the current is directly proportional to the electro-motor power of one complete or other source of electricity.*"

"It follows that various elements and combinations may have a different value and that, in choosing them, consideration must be paid to their varying electro-motor power. If we wish to obtain a certain strenght of current—and this must be comparatively great in electro-therapeutics—we must choose elements of relatively great electro-motor power, induction apparatus of a certain size where coils have a sufficiently large number of turns."

"2. You will at once discover, however, that although the electro-motor power remains the same, the quality of the circuit of closure has a very decided effect on the strength of the current. (I presume, as a matter of course, that you employ one of the accessory apparatuses furnished by physicists in measuring the strength of the current.) The circuit of closure introduces a certain resistance (R) to the passage of the current. Circuits of closure of various constructions produce different resistances, and changes in the strenght of the current will ensue according to the variations in these resistances. The following law formulates this relation: *the strength of the current is inversely proportional to the resistance in the closed chain.*

"From a combination of this law with that previously laid down, it follows directly that the expression of the strength of current of a closed combination is the following: the strength of current is equal to the electro-motor power divided by the resistance, or $I=\frac{E}{R}$."

"This statement is of no small practical importance, since we have to deal in the human body—as you will soon learn—with enormous resistance to conduction, and we must therefore choose, for electro-therapeutic purposes, combinations of relatively large electro-motor power, though even then we will only obtain currents of relatively little strength."

"3. Further examination will teach you that not alone the quality of the conductor in the circuit of closure will afford the resistance with it presence, but also the form of the conductor. Thus, a certain weight of metal, when it assumes the form of a short, thick cylinder, presents an entirely different resistance to the current from that presented when the metal has the shape of a long wire. It has been found that *the resistance of a*

conductor is directly proportionate to its length and is inversely proportionate to its transverse section."

"It therefore follows that the strength of current diminishes with increasing length of the conductor, but increases with its increasing transverse section. *Cæteris paribus* the current will be so much stronger the shorter and thicker the circuit of closure, and so much weaker the longer and thinner it is."

"These laws lead to certain deductions with regard to electrotherapeutics, which we will consider somewhat more in detail".

While in these few paragraphs the information for graduating the closage of electricity, and is made as plain as can be by words alone, yet not one physician in five can fully comprehend its full meaning, without giving a long time to the careful study of the subject. In fact this thorough and systematic study is essential to get out of electricity all that there is in it; but not one practitioner in a hundred can afford to do this, as he is compelled to receive what practical hints he can utilize in smaller works. For the physician who desires to devote a few months close study to electricity no better work is published in the English language than this one of Erb's.

Books and Pamphlets Received.

ARTICLE XLVI.

Transactions of the Medical Society of the State of Tennessee, Fiftieth Annual Meeting held at Nashville, Tenn. Dr. W. F. Glenn in the Chair; the society was addressed by several prominent members present, and a great many interesting and valuable papers were read and discussed. Altogether the meeting was a success. The next meeting will be held at Chattanooga, commencing the second Tuesday in April, 1884.

A contribution to the Study of Lacerations of the Cervix, Uteri and Perineum. By Thomas A. Ashby, M. D. (Read before the Clinical Society of Maryland, May 4th, 1883.)

Forty-Second Annual Announcement of the St. Louis Medical College, Winter Session, 1883-84, and Catalogue for 1882-83. The regular course of lectures will commence on Monday, September 14th, 1883, and continue until March 1st, 1884. For further particulars see advertisement.

Forty-First Annual Announcement of the Rush Medical College, Session of 1883-84.

Fifteenth Annual Report of the President of the Inebriate's Home, Fort Hamilton, N. Y., for the year 1882.

Twenty-Third St. Louis Fair, opens Monday, Oct. 1st, and closes Saturday, Oct. 6th, 1883. Premiums $50,000, appropriated by the Association. All railroad, steamboat, and express companies have agreed to carry passengers and freight to the St. Louis Fair at reduced rates.

This is a chance for a country practitioner to visit our great city and renew his outfit and at the same time to visit one of the greatest annual fairs in the United States and see two of the grandest spectacular parades known in this section of the country.

Forty-Third Annual Announcement and Catalogue of the Missouri Medical College, Winter Session, 1883-84. For further particulars see advertisement.

The Treatment of Syphilis. By J. Marian Sims, M. D. (Reprint *British Medical Journal.*)

Eighteenth Annual Announcement of the Missouri Dental College, Session 1883-84.

The Management of Abortion. By Walter Coles, M. D., (Read before the St. Louis Obstetrical and Gynæcological Society. April 19, 1883.)

El Repertorio Medico Periodico, Illustrando Mensual, de Medicina, Cirurgia, Farmacia and Auxilary Sciences, Published by Wm. Woods & Co., 56 and 58 Lafayette Place, N. Y.

Does Excision of the Larynx tend to the Prolongation of Life? A paper read before the College of Physicians of Philadelphia, April 4th, 1883. By J. Solis-Cohen, M. D., (reprint).

Nineteenth Report of the Trustees of the City Hospital of Boston, with reports of the Superintendant and Professional Staff, 1882-83.

Report of the Board of Health of the State of Louisiana, to the General Assembly for the year 1882 and the first six months of 1883, Embracing the Quarantine and Sanative Operations of the Board of Health, during a period of eighteen months, Jan. 1st, 1882 to July 1st, 1882. [Baton Rouge: Leon Jastremki, State Printer, 1883.

Report for the year 1882-1883 of H. A. Newton, Director to the Board of Managers to Observatory in Yale College, Presented by them to the President and Fellows; to which is appended the Report of the Astronomer in charge of the Horological and Thermometric Bureaus.

The Relative Value of Bovine and Humanized Vaccine Virus, Practically Considered. By Thad. M. Stevens, M.D., Indianapolis.

Second Annual Report of the Medical Mission at Tai-Yüen-fu Shansi, North China, in connection with the China Inland Mission, under the care of Harold Schofield, A. M., M. B., F. R. C. S. [Shanghi: American Presbyterian Press, 1883.

Answer of Thad. M. Stevens, M. D., to charges of the Indiana State Board of Health, together with Statements in proof and other matters. [Reprint Transactions Indiana State Medical Society.

News Items.

Article XLVII.

The Celebrated Anatomist Pacini died at Padua.

In violent toothache Guillat injects chloroform into the submucons tissue at the gums.

According to statistics, of Dr. Lannois, the average mortality, during the year, from Typhus fever in the French Army is 14 per. cent.

An obstinate case of singultus which could not be controlled by morphine hypodermically, yielded to an injection of Pilocarpin. Muriatic. 0.02—1. 0 aq.

From the 19th to the 20th of August. there were 3523 deaths from cholera in Cairo Egypt. in the neighboring villages there were 1968 altogether.—*Med. Zeitung.*

In response to the wishes of the readers of *Gaillard Medical Journal* and the *American Medical Weekly* the Journal has been changed once more back to a monthly.

Dr. Theophilus Parvin has taken the Chair of Midwifery in the Jefferson Medical College, his successor to the Chair of Obstetrics in the University of Louisville, is Dr. John R. Octerlong.

Dr. P. D. Yost, of St. Louis. one of the members of the Mo. State Board of Health, died from injuries sustained in falling from the window of his room to the pavement below, while in a state of delerium.

Gold Medal to Dr. Brown-Sequard.—The Royal College of Physicians has awarded the gold medal, founded in memory of the late Dr. Baly, as a mark of distinction in physiology, to Dr. Brown-Sequard.—*Record.*

Dr. J. C. Dalton, the eminent physiologist, has resigned his chair in the College of Physicians and Surgeons, New York. His successor is Dr. John G. Curtis, who for a number of years has been the A sistant Professor.

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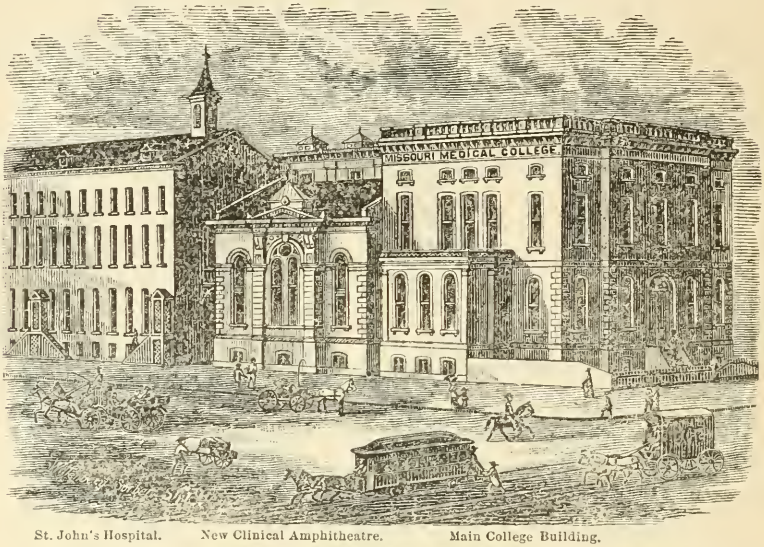

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Professor of Anatomy and Diseases of the Ear and Throat.

J. P. KINGSLEY, M. D., SEC'Y,
Professor of Physiology and Clinical Professor of Diseases of Children.

T. F. PREWITT, M. D., DEAN,
Professor of Principles and Practice of Surgery and Clinical Surgery.

C. O. CURTMAN, M. D.,
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P. V. SCHENCK, M. D.,
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The great necessity for a fluid food that would possess *all the elements necessary for the support of the system* having long been felt by the Medical Profession, we call attention to this preparation, containing the *entire nutritious properties* of the muscular fiber, blood, bone and brain of a healthy bullock, dissolved by aid of heat and pepsin, and preserved by spirit; thus constituting a perfect nutritive, reconstructive tonic.

It is not a mere stimulant, like the now fashionable extracts of beef, but contains blood-making, force-generating, and life-sustaining properties, pre-eminently calculated to support the system under the exhausting and wasting process of fevers and other acute diseases, and to rebuild and recruit the tissues and forces, whether lost in the destructive march of such affections, or induced by overwork, general debility, or the more tedious forms of chronic disease. It is friendly and helpful to the most delicate stomach, and where there is a fair remnant to build on, will reconstruct the most shattered and enfeebled constitution. It is entirely free from any drugs. Dispensed in 16 oz. and 12 oz. bottles.

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The various brands and their retail prices are as follows "Viandine" for preserving meats, poultry, fish and game, 50 cents per lb. "Ocean Wave" for oysters, clams, lobsters. fish &c., 50 cents per lb. "Pearl" for cream, $1.00 per. lb. "Snow flake" for milk, butter and cheese, 50 cents per lb. "Queen" for eggs, $1.00 per lb. "Aqua Vitae" for medical purposes and for keeping fluid extracts, $1.00 per lb. "Anti-Ferment," "Anti-Mold," Anti-Fly, 50 cents each

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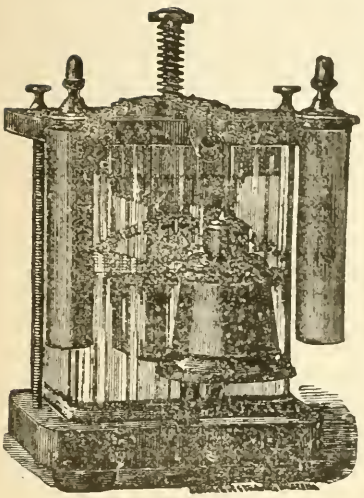
One part dissolved in 500 parts of water, acidulated with 7.5 parts of hydrochloric acid, should digest at least 50 parts of hard-boiled Egg Albumen in 5 to 6 hours at 100° to 104° F.

DRY PEPSIN CONCENTRATED, particularly recommended to manufacturers, possesses 8 times the strength of the above.

PREMIUMS were awarded to the above preparations at the International Exhibition Vienna, in 1873, and the Centennial Exposition in Philadelphia.



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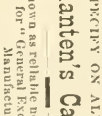

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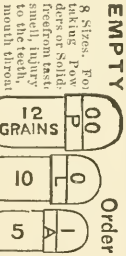

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PREFACE

TO DR. RUMBOLD'S HYGIENE AND TREATMENT OF CATARRH.

The theory and practice contained in this work, is the product of over twenty years of continuous labor, observation and study.

I had been but a few years in the practice of this specialty, when I discovered that the successful management of this common and tenacious complaint, depended on the faithful observance of the laws of health by my patients. I soon found, also, that even after they had recovered as completely as it was possible for them to do, the continued observance of these hygienic rules were required, in order to maintain their health.

It is absurd to think that a patient can be successfully treated, while he continues to violate the laws of health. One might as consistently ask a physician to cure him of a burn, while he continues to expose himself to the fire, as to ask to be relieved of a catarrh, while he neglects to employ the means to prevent a renewal of its cause.

For these reasons, I commenced in 1862, to give such rules to my patients as observation had taught me were useful in aiding them to take care of themselves during those seasons of the year in which they were most liable to take cold. These rules I have given in chapters; to these chapters I have added several others on Sanitary Measures, embracing the following subjects: Cleansing the nasal and aural passages; care of the teeth; attention to the surface of the body, and the mental and physical effects of tobacco. I have also added a chapter, detailing what should be done in the event of a cold being taken.

I do not claim that what is written here on hygienic and sanative measures are new, but I do say that it has not been given with sufficient detail and earnestness by any writer on this subject.

Although I have done my utmost to indicate as plainly as possible, the proper management of every phase of this disease, giving three chapters containing the histories of more common cases and their treatment, yet those who expect that this book will enable them to treat successfully *every* case, will be mistaken. The circumstances surrounding each patient are different from those of every other patient, making it necessary that each case should be studied by itself. The management of this disease cannot be learned in a short time.

Having gone entirely out of the beaten track, with respect to the method of making local applications, I may have been too regardless of long established practices. This, however, I leave to the general profession, who, after all, are the TRUE CRITICS. Their almost universal dissatisfaction with the prevailing methods, will soon lead them to ascertain for themselves, whether, what I have recommended is an improvement or merely a change.

My remarks against the employment of the Eustachian catheter may grate upon the ears of some of my brother practitioners. My reason for discontinuing its use almost entirely is because it has been superceded by methods that are not at all irritating. It would not surprise me if Politzer's and Gruber's methods would place the Eustachian catheter in the drawer where we preserve our discarded instruments.

Should my description of the "Patency of the Eustachian Tube" not be explicit enough to ensure the consideration of this disease in works on Otology, other writers will soon supply the deficiency, as the complaint is not an uncommon one. I wish to record my opinion that the phenomena attending this disease will prove that the present views of the functions of the Eustachian tubes are erroneous.

I fully believe that what I have said on chronic catarrhal inflammation of the nasal passages preceding all catarrhal diseases of the respiratory tract, ear and eyes; on the liability of this inflammation giving rise to diseases in other parts of the organism that are intimately connected with the nasal cavities by nerves; on the paramount importance of hygienic measures; on the great advantage of treating all catarrhal mucous membrane with non-irritating remedies by mild methods; on the spray producer being the only instrument that should be used to make applications to the enflamed mucous membrane; on the possibility of successfully treating the majority of laryngeal troubles by applying remedies to the pharyngo-nasal cavity alone; on the importance of making ocular and aural examination of the ear at the same time, by means of the Acoutoscope; on the certainty of detecting a perforation of the membrana tympani by the tuning fork; on the advantage gained by maintaining a perforation of the membrana tympani to insure a more thorough treatment of the Eustachian tube and the middle ear; and on the functions of the uvula, the azygos prominence, the Eustachian tube and the mastoid cell, will stand the test of close examination, and will be accepted by the profession in a few years.

If it is urged against me, that I have differed very materially from many who are recognized by the profession as being well informed on this subject, I have only to say that what has been given here, is the result of an honest search after facts, and that these facts are stated as I saw them, not fearing to question the correctness of long acknowledged theories, my only guide being my patients' reports—THIS HAS BEEN MY EDUCATOR.

It is conceded by all who have had extensive experience in operative procedure requiring the use of a large variety of instruments, that it is an important means of securing success to have every thing so arranged, that the operator may have the greatest facility for making examinations, applications, etc. With this end in view I have spared no pains to make the armamentarium of my office, including my operating table, as perfect and convenient as possible. It has been my aim to simplify the methods of cleansing and of making applications, but I have not sacrificed thoroughness for simplicity, nor have I sacrificed mildness for any other quality.

The substance of what is said against the use of the Weber douche, I read before the St. Louis Medical Society in September, 1868. The spray producers were presented to the society—after I had used them for three years—in 1869; in Aug., 1868, I gave to Prof. Jno. T. Hodgen, (Professor of Surgery in the St. Louis Medical College) my views concerning the function of the Eustachian tube, saying that Toynbee, Troltsch, Rosenmuller and others were in error when they said that the supply of air to the middle ear took place during the act of deglutition only, and that the observations, made repeatedly by myself, proved that air continuously enters the middle ear, also that the air in this cavity was always in a *rarefied* condition. In September of that year, I read to Prof. Hiram Christopher, of Independence, Mo. the cardinal points of what is contained in the chapters of the Functions of the Eustachian tube. The whole subject was read before our society in 1872. The chapter on the Function of the uvula and azygos prominence was also read before this society in 1876.

The illustrations, with the exception of the section of the ear, which is taken from Henle, are original. It was not thought necessary to state under each illustrated instrument, "the author, etc.," although every one of them are of my own invention.

Many may think that I have been too prolix on some points, but now that my book is in type, I fear that I have not been as definite as the importance of many of the subjects demanded.

T. F. R.

1225 Washington Avenue
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